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THE ART OF EDUCATION



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THE ART OF EDUCATIO

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OF CALIFORNIA

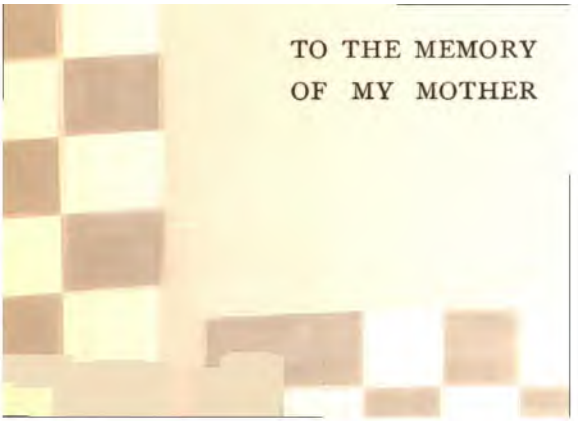
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TO THE MEMORY
OF MY MOTHER

PREFACE

So many books have been written on the subject of education that one feels almost like apologizing for adding another to the list. But, of course, the apology, in any case, would involve the excuse that "no other book quite meets" a certain demand, or "quite supplies" a particular need; and perhaps this conviction, so naturally to be expected of an author, will receive charitable consideration by even the critical reader. The most that I will venture to say concerning this book is that it is meant to substitute a scientific for a sentimental conception of the social meaning and value of education, and that the ideas advanced have proved to be inspiring, and practically helpful, to many who have heard them expressed in the form of lectures.

It is obvious enough that the interest and enthusiasm of the teacher are dependent to some extent upon his ideas with respect to the importance and dignity of the work in which he is engaged. Public respect for education, too, and for the teacher, is affected more or less by the prevalent opinion concerning the relative standing of the art of education among the various other occupations. With the object of contributing to the

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formation in the mind of teachers and the general public of a true estimate of the rank of education among the arts, and its relative dignity, I have devoted the first chapter to an attempt to construct a valid classification of the arts, in which the place and relation of education shall be revealed. I base this classification on potential social utility which, as the reader will see, is also the basis of complexity and relative difficulty of successful practice. So classified, the arts arrange themselves in an ascending scale, and education is shown to occupy a place subordinate only to those infinitely difficult arts the object of which is the transformation of social groups, and of society itself. It is the highest of the vital arts, outranking the mechanical arts, and even the so-called "fine arts."

With whatever additional respect for education the results of this classification may awaken in the mind of the reader, and with whatever inspiration they may furnish if he happen to be a teacher, the book proceeds to inquire into the essential nature of education considered as an art, to specify and analyze the motive forces involved in it, to determine which of these are most important, and to discuss some of the methods that may best be employed to direct the educational forces to approved individual and social ends.

Education being an art, it must share the characteristic common to all the arts, namely, the control of the forces of nature. It is distinguished, in part, from the

other arts by the particular set of forces with which it deals, namely, those that impel to action, the feelings. They are the true "educational forces." Chief among them is desire. Desire is the mainspring of action, the fundamental educational force. To educate is practically to control desire.

Desire, however, awakens toward anything that seems capable of satisfying it a peculiar feeling known as interest; and, likewise, interest, if sufficiently strong, invariably occasions desire and impels to action. Desire, then, and hence activity and development, may be controlled through interest; and education practically reduces itself to a process of controlling and directing interest.

Interest, of course, invariably attaches itself to an object. The objects of interest are material and spiritual or ideal. These are embraced by the term environment. They constitute the sole means of influencing desire and interest, and hence the sole means of education. We are led, therefore, to the consideration of education as the art of manipulating the objects of the environment so as to awaken interest and to induce the activities appropriate to physical, mental and moral development. The forms of manipulation are manifested in educational methods, and a chapter is devoted to the most approved methods of controlling interest.

The primary end to which the control of interest should be directed is, of course, individual development.

This is measured by the degree of the individual's adjustment to the various phases of his environment. Such adjustment the reader will find discussed in the chapter on "The Finished Product." But to avoid misapprehension, and to preserve the broader educational outlook, it seemed necessary to include a discussion of the ultimate end of education, which, as in the case of all the arts, is Life.

With the assignment of education to its proper place among the arts, the determination of its essential nature, the valuation of its methods, and a discussion of its immediate and remote ends the book is concluded by some more or less obvious remarks in regard to the personal elements necessary to the successful practice of the educational art. These are knowledge, skill and interest, knowledge being the foundation element. In education, as elsewhere, "knowledge is power."

This brief, and perhaps repellently technical, account of the substance of the book ought to be of assistance in the way of enabling the reader to begin its study with a comprehension of the discussion as a whole, and with some conception of its unity.

Whatever faults the book may contain, and no doubt they are many, the author will be pardoned for entertaining and expressing the conviction that it will be enlightening to the general reader who is interested in education, and particularly stimulating and inspiring to those who are teachers, actual or prospective, for whom

it is more especially designed. My friend Professor Paul Monroe, of Columbia University, has done me the kindness, which I here gratefully acknowledge, to read the manuscript and to offer a few suggestions in regard to possible improvements. My indebtedness to others is sufficiently acknowledged, I think, in footnotes and references.

I. W. H.

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THE ART OF EDUCATION

THE ART OF EDUCATION

CHAPTER I

THE PLACE OF EDUCATION AMONG THE ARTS

What nobler service can one render to the state than that of training and instructing the rising generation? — CICERO.

What artists do you think most worthy of admiration, those who form images destitute of sense and movement, or those who produce animated beings endowed with the faculty of thinking and acting?

— SOCRATES.

1. Purpose of the Chapter. — There can be nothing, I think, more inspiring and helpful to those who are engaged in the work of education, or more illuminating to those who are not, than a correct conception of its real dignity and importance. Sentimental ideas with respect to education — "education, the bulwark of our liberties," "the schools, the hope of the country," and the like — are not sufficient. A reasoned conclusion with regard to the place among the arts that belongs properly to education, should take the place of pious opinion.

It is sometimes said that education is the highest art. Colonel Parker used to say, "Education is the highest art in the world." If that were really true, what an inspiring thought it would be! A proposition so significant should be capable of logical demonstration. We

listen in vain, however, to hear such a declaration coupled with convincing proof. It is uttered sometimes as a dogma, sometimes as a self-evident truth, and is usually addressed to teachers, by those who know little about education, with the generous purpose of impressing and inspiring them with a sense of the loftiness of their calling. Far better than sentimental laudation of teaching would be a demonstration, on purely logical grounds, of the place or rank to which education must necessarily be assigned among the arts. That alone will compel the recognition and respect properly due to the art of education. To present such a demonstration is the purpose of this chapter.

2. **Meaning and Scope of Art.** — The true place of education among the arts can be discovered only by analyzing the conception of art and classifying the arts upon the basis of some fundamental and accepted principle. The first thing, then, is to consider the meaning and scope of the word "art."

Art, to most minds, signifies the fine arts — painting, sculpture, poetry, music, and the like. The word, however, has a much broader meaning. There are mechanical, industrial, or useful arts as well as the liberal, polite, or fine arts. But the industrial arts and the fine arts, broadly speaking, cover the whole range of human activities. Art, then, includes all the efforts of man to achieve results. It may be defined as the endeavor to realize an idea, ideal, or purpose through the conscious

employment of means. It is therefore identical and co-extensive with intelligent action. A classification of the arts, in which alone the true place of education can be revealed, must therefore be, in effect, a classification of the various human occupations.

3. **Popular Classification of the Arts Illogical.** — Elsewhere it has been pointed out that the familiar classification of the arts into the "Fine Arts" and the "Useful Arts" is illogical.[1] The fine arts are useful for exactly the same reason that anything is useful; they satisfy desire; and if the useful arts are not fine, more's the pity. They might be fine, should be so, and do become so in proportion to the degree in which intelligence and the element of beauty enter into them. In a world of right human relations, in which joy in work could become everywhere a reality, the most menial occupation might be lifted by intelligence, beauty, and pleasure to the level of a fine art. From the standpoint of social well-being no necessary occupation is menial. Its end is life, and the end dignifies both the work and the worker. This does not mean that all the arts are of equal rank. That cannot be. Ditch-digging and hod-carrying can never be raised to an equality with landscape gardening and architecture. They are not equally serviceable to human needs, and they do not offer equal opportunity for intelligence and the play of the creative

[1] See an article by the present author on "The Classification of the Arts," *Pop. Sci. Mo.*, Vol. LXX (May, 1907), pp. 429–436.

imagination. They are comparatively low forms of art. It is conceivable, however, that some elements of imagination and pleasure might be imparted to even the lowest occupations if the conditions of these occupations were made human, and if a true conception of their relation to the well-being of mankind prevailed. At any rate, the classification of the arts into "Fine" and "Useful" is merely conventional, and is of little scientific value. "Beauty," says Emerson, "must come back to the useful arts, and the distinction between the fine and the useful arts be forgotten. If history were truly told, if life were nobly spent, it would no longer be easy or possible to distinguish the one from the other. In nature, all is useful, all is beautiful." [1]

4. **Social Utility the Basis of a Logical Classification.** — If, then, we reject this popular classification of the arts, we must find a basis or principle for another more significant and logical classification. This basis or principle is best deduced from a true conception of the end or object of the arts. The end of all the arts is the same; namely, the promotion of human well-being. Some, indeed, pretend that the so-called "Fine Arts" exist for Art's sake, and that they ought not to be subjected to so prosaic, some would say vulgar, a test as utility; but this is short-sighted. Art's "sake" is not final. "Man is the measure of all things," in more senses, perhaps, than Protagoras conceived. The

[1] Complete Works, Concord Edition, Vol. IV, pp. 367–368.

true test of any activity, individual or social, is its effect upon human life. The only sound and deeply significant principle of a classification of the arts is, therefore, the principle of potential social utility.

5. **Art and Material Phenomena.**—Accepting potential social utility, then, as the true basis of a classification of the arts, we may pass to the consideration of an important fact. That fact is that in the practice of an art, no matter of what kind, material phenomena are involved. As a rule some form of matter is consciously employed. Matter is the medium in which and through which the ideas, ideals, purposes, and effects of art are objectified. As embodied in material form these ideas, etc., are called art products. They include all the works of man's hands, from the simplest flint implement of the savage to the complex industrial machine; from the hut of the primitive man to the Parthenon; from the rude drawing of the cave dweller to the Sistine Madonna. No art can divorce itself entirely from matter. Painting is impossible without canvas, brush, and pigment. The sculptor cannot "body forth" his ideal conceptions without his chisel and his marble, nor the architect create his "poem in stone" without the material means of building. Even the poet, with his "eye in a fine frenzy rolling," is dumb without the material means of utterance. "Language is the marble in which the poet carves." Music, the most ideal of the arts, is no exception to the rule.

Song is impossible in a vacuum, and the musician, no matter how skillful, is powerless without his instrument. Even the intellectual arts have a physical basis. Art, therefore, and material phenomena are inseparable. A classification of the arts must be in effect a classification of the forms of matter.

6. Classification of the Forms of Matter and of the Arts. —Now, as to the forms of matter, we have a familiar classification. Matter is inorganic, organic, and, to use Mr. Spencer's expression, superorganic. The inorganic may be allowed for our present purposes to include all non-living substances, the organic all living things, and the superorganic all social groups. These three divisions of matter are based upon, and stated in, the order of their complexity. Organic matter is more complex than the inorganic because it involves the life principle; and the superorganic is still more complex because it involves the principle of association. As the inorganic, the organic, and the superorganic cover all forms of matter with which the arts must deal, there should be three corresponding divisions of the arts — those which are employed on non-living substances, those which realize their objects in living things, and those which seek to realize their ideas and ideals in social organisms. These three grand divisions of the arts I have called the Physical Arts, the Vital Arts, and the Social Arts. Thus we have a classification of the arts based upon the com-

plexity of the material with which they deal. What relation has this complexity to potential utility?

7. **The Relation of Complexity to Utility.** —As to the relation between the complexity of the matter employed by the arts and the potential utility of the arts themselves, I think it can be shown that they vary directly. Auguste Comte, the French philosopher, laid down these two principles: (1) "The practical applications of the sciences increase with their complexity"; and (2) "Phenomena grow more susceptible to artificial modification with the increasing complexity of the phenomena."[1] Comte's classification of the sciences, it will be remembered, was based on increasing complexity (and decreasing generality). It is as follows: Mathematics, Astronomy, Physics, Chemistry, Physiology (Biology), Social-physics (Sociology). A question might be raised as to whether mathematics is a science in the same sense as astronomy and the others, but, leaving that aside, the principle that the practical applications of the sciences increase with their complexity amounts, when considered with this classification, to an assertion that the vital and the social sciences have, through their corresponding arts, a wider range of application than the physical sciences. But application to what? Obviously to phenomena. But phenomena, according to Comte's second principle, are more susceptible to artificial modification the more complex they are; that is, more can be done

[1] See Ward's "Applied Sociology," pp. 8–9.

with them, the greater the effects for good or ill that can be produced. The arts, then, that deal with the most complex phenomena are potentially the most useful. The physical arts deal with the least complex phenomena, the vital arts with those next in order, and the social arts with the most complex of all. The vital arts are, therefore, more useful potentially than the physical, and the social arts are potentially the most useful of all. We, therefore, arrive at the conclusion that a classification of the arts based upon the relative complexity of the phenomena with which they deal is a classification based on relative potential utility.

It is interesting to observe, too, that the complexity of an art, that is to say, of the material with which it deals, determines the difficulty of its practice. It is easier to fashion wood, bronze, or stone into a preconceived shape or form than to modify a living thing, plant or animal, until it represents a preconceived ideal. An inorganic form of matter "stays put"; it does not react by virtue of inherent forces tending toward its natural development, against the efforts of the artist to effect its transformation. The vital arts, therefore, demand more skill than the physical, and the social more than the vital. The greater the complexity of the art, the greater is the opportunity it affords for the display of intelligence. Hence our classification of the arts on the basis of the complexity of the material with which

they deal is a classification not simply on the basis of potential social utility, but also upon difficulty of practice, or amount of intelligence demanded, as well.

We have shown, then, that, on the basis of complexity, potential utility, and difficulty of practice, the arts may be divided, in an ascending order, into the physical arts, the vital arts, and the social arts. These divisions must be further analyzed to reveal the true place of education.

8. The Physical Arts. — Taking up the first division, the physical arts, it is obvious that they must include all the arts that realize their conceptions in inorganic forms of matter. The best examples are those in which ideas are objectified in the various non-living substances — wood, stone, iron, copper, brass, marble, etc. Such arts obviously vary in the degree of their complexity with respect to the means employed. The industrial arts of the primitive man, for instance, were exceedingly simple in comparison with the industrial arts of to-day. The only essential difference, however, is occasioned by the modern use of the machine. The primitive man was a toolmaker and a tool user, a handicraftsman *par excellence*. The artisan of to-day is a machine laborer. The machine, however, is only a combination of tools operated by some natural force. Its seven mechanical principles may be reduced to two, the lever and the inclined plane. The principal division of the physical arts is, then, into the hand arts and the machine arts, manu-

facture and machinofacture, the handicrafts and the mechanical trades.

But manufacture and machinofacture include not merely the mechanical arts, but the "fine" arts as well. There is no essential difference, so far as material, means, and end are concerned, between the art that makes a useful thing (useful, of course, in the narrow sense) and a beautiful thing. The wide distinction that may and does separate the work of the shop from the work of the studio is adventitious. They are one in kind. Intelligence, love of the beautiful, conditions making joy in labor possible, will transform the shop into a studio, and the artisan into an artist. In a strictly rational classification of the arts, then, architecture must take its place with the building trades, painting with the decorative arts, and the sculptor must stand with the molder and the stone mason.

This inclusion of the fine arts in the physical arts along with the mechanical trades will not seem so surprising if the fact be taken into consideration that the fine arts themselves have grown out of the physical arts. "Art, in the ages of custom," says Tarde, "when it is born spontaneously without any wholesale importation, springs up from handicraft, 'like a flower from its stem,' under the warmth of religious inspiration. This was the case in Egypt, in Greece, in China, in Mexico and Peru, and in Florence. Architecture, Gothic or otherwise, is born of the builder's craft; the painting of the fourteenth

century, of illuminating, and illuminating, of the craft of the copyists; sculpture, of mediæval cabinet making, of the tombs of Egypt; modern music, of the ecclesiastical habit of intoning; eloquence, of the professions which involve speaking, of bench and bar; poetry and literature, of the different ways of speaking, of narration, of instigation, of persuasion."[1]

Let not this inclusion of the fine arts in the physical arts seem to be a disparagement of the fine arts. It is not denied that historically they have ranked far above the arts of productive labor. They have been the arts of leisure. Joy and beauty have dwelt among them. Intelligence and genius have been their devotees. They have consequently been raised to a high level of perfection; some say the highest level. The art of Greece, it is said, will never be surpassed. Zeuxis, the Grecian painter, put grapes on his canvas so true to nature that the birds flew down to peck at them; and Parrhasius, his pupil, pictured a curtain so successfully that it deceived even the practiced eye of Zeuxis himself. The marbles of Praxiteles are the models of all ages. Greek art, it is said, is perfect. But the arts of productive labor are so inferior that men seem to forget sometimes that they are arts at all. They have been practiced under compulsion. They bear the taint of serfdom and slavery. They have been divorced from beauty and pleasure. They have not invited geniu

[1] Tarde, "Laws of Imitation," New York, 1903, p. 354.

but on the contrary they have repelled it. No wonder that, like Cinderella, they are scorned by their more fortunate sisters. But think of the possibilities of these arts when beauty is brought back to them, when their end is life, and the joy and intelligence of the laborer are manifested in his product.

9. **The Vital Arts.** — Turning now to the second division, the vital arts, these include, as has been seen, all the arts which realize their conception in living things. There are two kinds of living things, plants and animals. There are therefore two grand divisions of the vital arts, those which deal with plants and those which deal with animals. They are the botanical arts and the zoölogical arts. Inasmuch as it would be distasteful to some to find man classed with the animals, we may make a concession to popular prejudice and divide the forms of life into plants, animals, and man. The corresponding arts are the botanical (better the phytological, from φυτόν, a plant), the zoölogical, and the anthropological.

The phytological arts include agriculture, horticulture, forestry, landscape gardening, and the like. It will be surprising, and to some possibly it may seem ridiculous, to find agriculture, that is, farming, ranked above the fine arts. It must be remembered, however, that the principle of the present classification is not actual, but potential utility, not the existing conditions of the arts, but their ideal conditions. Farming is to-day, as a rule,

empirical. It is seldom practiced consciously as an art. The farmer too often has little conception of the possibilities and the real significance of what he does. "The planter, who is a man sent out into the fields to gather food," says Emerson, "is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer, instead of Man on the farm." [1] But farming ideally and potentially is something vastly more than breaking "the stubborn glebe," scattering seed, and gathering in the harvest. It is the art of conceiving new and improved forms of plant life and, by intelligent control of the forces operating upon that kind of life, of bringing these new forms into concrete existence. Scientific farming has already revealed some of the possibilities in this direction. It has developed new varieties of grains and grasses, and by an improved adaptation of crops has made the desert to blossom as the rose. What is yet to be accomplished is best suggested by modern achievements in horticulture. Men like Luther Burbank have, by intelligence and skill, developed new varieties of fruit and of flower, — the seedless orange, the coreless apple, the spineless cactus, the variegated poppy. They have originated new varieties, even new species, and have thus duplicated the work ordinarily attributed to the Creator. Farming practiced as an art, with the intelligence and the enthusiasm hitherto applied to the fine

[1] Complete Works, Concord Edition, Vol. I, p. 83.

arts, would deck the world in new forms of beauty and multiply utilities almost beyond the possibility of the imagination to conceive.

The botanical or phytological arts are, as has been said, limited in their application to plant life. Above the plants are the animals. They are a higher, a more complex, form of matter. They are the material in which the ideals of the zoölogical arts are realized. Hence the zoölogical arts must rank above the botanical arts. They include domestication, breeding, and training. The utility of these arts will not be questioned. Who can estimate, for instance, the value to mankind of the domestication of animals? "A time came," says Fiske, "when man learned how to turn to his uses the gigantic strength of oxen and horses, and when that day came it was the beginning of such an era as the world had never before witnessed. So great and so manifold were the results of this advancement, that doubtless they furnished the principal explanation of the fact that the human race developed so much more rapidly in the eastern hemisphere than in the western. . . . At the time when the western hemisphere was visited by the Europeans of the sixteenth century after Christ, its foremost races, in the highlands of Mexico, Central America, and Peru, had, in respect of material progress, reached a point nearly abreast of that which had been attained in Egypt and Babylonia, perhaps seven or eight thousand years before Christ; and this difference of nine

or ten millenniums in advancement can be to a very considerable extent explained by the absence of horses and oxen in the western hemisphere. If such a statement surprises you, just stop to consider what an immense part of our modern civilization goes back by linear stages of succession to the era of pastoral life, that state of society which is described for us in the Book of Genesis and in the Odyssey; then try to imagine what the history of the world as we know it would have been without that pastoral stage."[1] But bare utility is not the only element connected with these arts. When we consider the work of the breeder and the fancier, the possibilities of bringing into existence new animal forms, and of producing in these forms strange and pleasing effects by establishing new shades and combinations of color, the element of beauty is also seen to be present, potentially at least, in these arts as well as in painting and sculpture. The method of the breeder and fancier is artificial selection, which is far swifter in modifying a type than natural selection. Lord Somerville, in speaking of what breeders have done for sheep, says, "It would seem as if they had chalked out upon a wall a form perfect in itself, and then had given it existence."[2] But if from the simplest beginnings, "while this planet has gone circling on according to the fixed

[1] John Fiske, "Essays, Historical and Literary," New York, 1902, Vol. II, pp. 252–253.

[2] Quoted by Darwin, "Origin of Species," Chap. I, p. 27.

law of gravity, endless forms most beautiful and most wonderful have been, and are being evolved" under the operation of natural selection, until the world is clothed with the multiform varieties of life, who can set a limit to the possibilities of the process when it is brought under the control of human intelligence through artificial selection? We have hints, and only hints, of these possibilities in man's success in transforming the wild Indian fowl into the various domestic breeds, the wild species *Canidæ* into the numerous varieties of the domestic dogs, and in differentiating the various kinds of horses, hogs, sheep, and cattle, from their wild progenitors.

It is in the training of animals, however, that we arrive at the highest of the zoölogical arts. For training involves, not a modification of form or color, but a change in the mental constitution and conduct of the animal. Its results are not merely physical, but mental. It is directed, indeed, to the modification of the mind rather than to that of the body. It is psychic rather than somatic. Some reflection may be required to appreciate the true rank of this art, but, considered upon the basis of its potential utility, complexity, and difficulty, it must be recognized as superior to the "fine" arts. Mr. John Burroughs may write of the "Reasonable but Unreasoning Animals,"[1] but we know that a dog, for instance, is teachable, and to train a dog into

[1] *The Outlook*, December 14, 1907.

an intelligence comparable to that of a human being, as has been done, is a greater art than to paint it or to reproduce its form in bronze or marble.

But if the domestication and training of animals is so important an art, what is to be said of the training and education of the human being? Man is an animal, the highest animal. "What a piece of work is man! how infinite in faculty! how noble in reason! in form and moving how express and admirable! in action how like an angel! in apprehension how like a God! the beauty of the world! the paragon of animals!" So said Shakespeare. Now the arts which have for their object the modification of the form and character of man, the anthropological arts, are the highest of the vital arts because they are exerted upon the highest, the most complex, form of life. The arts previously mentioned are, in a sense, mediate; these are immediate. They include all the arts which are devoted directly to improving the individual type of man.

Without attempting to enumerate the various anthropological arts, we may come at once to the art practiced in the school, — education in the narrow sense. The material here employed is the highest form of life. It is infinitely complex and plastic. It is not passive, like the material of the fine arts, but active in the highest degree. It reacts, sometimes by caprice, sometimes by open hostility, against the efforts of the artist, and thus interferes with his success. Infinite knowledge, patience,

and skill are required. The end is a perfect human being — perfection in body, mind, and character. The potential utility of such a being is immeasurable. Hence the education of the individual human being is the highest of the vital arts.

10. **The Social Arts.** — The social arts outrank even the vital arts, for their object is the realization, not merely of a perfect individual, but of perfect groups of individuals, — institutions, nations, societies. A group of individuals is more complex than a single organism. Social phenomena are more complex than vital phenomena. The social arts, therefore, since they undertake through the modification of individual lives and material conditions to bring into existence a preconceived ideal involving the perfection and well-being of groups, — an institution, a state, or humanity itself, — are obviously supremely complex and difficult. They afford opportunity for infinite skill and intelligence, and they must necessarily employ all the other arts in the realization of their purposes. They are the highest of the arts.

As just suggested, the social arts are employed in institutional management and in other forms of social control, — in government, in statesmanship. Roughly speaking, they are institutional, national, and societal. An example of the institutional arts is the art of home-making. A beautiful home, actually existing, is grander than the picture of such a home, or a literary description

of it, and she who creates that home is greater than poet or painter.

> "Who sweeps a house as for Thy laws,
> Makes that and the action fine."

How this thought should dignify and glorify the primary work of woman! When it is fully appreciated there will be no school without its classes in the domestic arts, and these classes will be filled by girls who have learned, or are learning, that there is true art and culture in setting a table, as well as in painting impossible landscapes or in murdering sleep with a musical instrument. The national arts are exemplified by government or statesmanship, the art of a Pericles, a Gladstone, a Lincoln. When the ideal of such an art is not merely a perfected state, but an ideal humanity, it becomes societal. It is then applied to society as a whole, a complex of individuals in their institutional and national relationships, for the purpose of effecting its transformation. It consists in organizing all the arts in a united effort to realize the loftiest conceivable ideal, a world of perfect human relationships. Such an art is, as yet, almost unrecognized. Its utility is almost wholly potential. But in such utility, in the complexity of its material, and in the difficulty of its practice, it outranks all the other arts. It is the supreme art. It is truly the art of arts.

11. **Diagrammatic Arrangement of the Arts.** — I have now suggested a classification of the arts based upon po-

tential utility. It may be diagrammatically arranged in the following form:

THE ARTS	3. Social	8. Societal	8. World-building	
		7. National	7. Statesmanship	
		6. Institutional	6. Management	
	2. Vital[1]	5. Anthropological	5. Humaniculture	EDUCATION
		4. Zoölogical	4. Animal culture	
		3. Phytological	3. Plant culture	
	1. Physical	2. Machinofacture	2. Machine trades	
		1. Manufacture	1. Handicrafts	

12. The Place of Education. — We have now shown, and by a glance at the diagram we may now see, the true place of education among the arts. Inasmuch as it involves an effort to realize in the individual human organism a preconceived ideal of body, mind, and character, it is a vital art. As such it stands at the top of this division. But scholastic education implies and involves school management as well as individual training and instruction. It is institutional as well as individual. Education, therefore, in the broader sense transcends the limits of the vital arts and reaches up into the social.[2]

[1] As intimated in the text, "vital" is used in this discussion in a broad sense. It includes the arts directed toward progressive changes in both body and mind. The purpose of the analysis, that is, to show the place of education, will be served best, it is thought, by making it as simple as possible.

[2] If society be considered as a collective being animated by its own life, and susceptible to influences consciously brought to bear upon it to determine its destiny, then we may properly speak of the education of

13. Education and the Fine Arts. — The true place of scholastic education among the arts is not, then, at the top. It is not "the highest art." And yet it ranks above any of the so-called "fine" arts, which in the present classification lie chiefly among the physical arts. Ideally all arts are "fine" arts, hence the "fine" arts do not appear in the classification as such. If the world could once appreciate the fact that properly, that is scientifically, considered, education ranks above the "fine" arts; and if the teacher could realize that the art he practices is potentially more useful, hence even more dignified and important, than any of the "fine" arts, we should begin to realize some of the larger possibilities of education.

Lest the conclusion here drawn may seem after all to be a forced one, let me try to strengthen it by a concrete illustration. Suppose we have before us a number of artists; let us say, a painter, a horticulturist, a literary artist, a sculptor, and a teacher. The painter has in his brain a conception of form and beauty, we shall suppose, of a flower; that is, an ideal. The contemplation of this ideal conception gives him a pleasure which he would share with others. Being an artist, he can objectify his conception. So he takes a canvas, pigments, and a brush, and sets to work. We watch

society. In this broadest sense of the term, education is not only a social art, but it is itself the art of arts, the art to which all other arts are subsidiary.

him daub in the background. A few swift strokes, and the outline of a flower appears. Finally there stands before us in indescribable beauty the identical form and color, embodied in the painted flower, that his mind had conceived. We admire it, and praise him for his art.

But here stands another artist, the horticulturist. He, too, has in his brain a conception of form and beauty, let it be also of a flower. He is delighted by his conception, and would reproduce it for the delight of others. So he goes into his garden and sets to work. He is skilled in all that pertains to plant life. He plants and selects and grafts and forces growth and selects and plants again. Thus he modifies the type of flower upon which he works. By and by he invites you into the garden, and behold! the identical flower, conceivably, which appeared on the canvas of the painter lives and grows before you, puts forth its blossoms, gives off its perfume, develops its seed, and reproduces its kind generation after generation. Which is the greater artist, he who painted the flower or he who reproduced it as a living thing?

Now comes the literary artist. His conception is that of an ideal person. He cannot paint, but he can write, so he puts his ideal in a book. We read the book and weep over the sorrows of a Werther, suffer with a Jean Valjean, laugh at a Don Quixote, or grow polemical over the character of the "Melancholy Dane." Wholly

fictitious persons are made to live and act before us, and they seem as real as any of the characters of history. What a wonderful art it is!

But the sculptor, too, conceives an ideal of beauty. He realizes that ideal in a block of marble. With his mallet and his chisel, he carves a figure so lifelike that in looking upon it the story of Pygmalion and Galatea becomes almost credible. He creates a Laocoön, and the Trojan priest and his sons writhe in agony in the coils of the serpents. In the Dying Gaul he catches and petrifies the anguish of Death. He immortalizes his conception of physical beauty in an Apollo or a Venus. This, too, is a marvelous art.

Finally, here is the teacher, a teacher skilled in the art of education. This teacher understands the laws of physical, mental, and moral growth, as the sculptor understands the laws of form, the painter, the laws of color and perspective, the gardener, the laws of plant life. The conception that this teacher has formed is that of a human being, beautiful in form, in feature, and in character. He takes a child as the sculptor takes the marble, the painter the canvas, the gardener a plant, and by skillful control of the forces which operate upon the "human plant" he directs its growth, physical, mental, and moral. Slowly he effects its transformation. Given time and opportunity, the ideal of his brain at last becomes an objective reality, and he can say, "Behold my ideal! an ideal person realized by my

art in living flesh and blood! You have seen in the other arts ideals produced in marble, in plant, in books, and on canvas — I have made the Word flesh, to dwell among men!" Is not education, then, the most difficult of these arts? Is it not the most complex? Is it not the most useful? Is it not, then, in a very true sense higher than any of the "fine" arts? The teacher is a painter, but his colors are the white and pink and rose of living flesh, which are but imperfectly imitated on canvas. The teacher is a gardener, but a kindergartner. The teacher is a sculptor, but a sculptor of life.

In the National Gallery of the Fine Arts in Florence is the statue of David, chiseled by the hand of Angelo. Its story has often been told. The stone from which it was created had been worked upon and thrown aside. When the artist was observed to stoop and examine it, he was asked, "Why waste time on a stone that has been rejected?" He replied in the immortal words, "I see an angel imprisoned in this stone, and I must let it out." But in a more literal sense angels are imprisoned within the undeveloped forms of children. All the qualities conceived as godlike exist in them potentially. Education is the art of realizing these qualities in a good, useful, and happy life. Therefore, for the teacher with artistic insight, skill, and devotion, it is possible to construct a statue which in beauty and usefulness will far transcend anything that is possible to the painter's brush or the sculptor's chisel.

SCULPTORS OF LIFE[1]

Chisel in hand stood the sculptor boy,
With his marble block before him;
And his face lit up with a smile of joy,
As an angel dream passed o'er him.

He carved that dream on the yielding stone,
With many a sharp incision;
In Heaven's own light the sculptor shone,
He had caught that angel vision.

Sculptors of life are we as we stand,
With souls uncarved before us;
Waiting the hour when at God's command,
The life dream passes o'er us.

If we carve that dream on the yielding stone,
With many a sharp incision,
Its heavenly beauty will be their own,
Their lives the angel vision.

— BISHOP DOANE.

[1] Slightly paraphrased.

CHAPTER II

THE ESSENTIAL NATURE OF EDUCATION

Art is but the employment of the powers of nature for an end. — MILL.

The one principle common to all forms of art and invention is that of causing natural forces themselves to do the work that man desires to have done. — WARD.

Nourriture passe nature.

1. **Purpose of the Chapter.** — Education, then, is an art as music, poetry, painting, sculpture, architecture, are arts; as woodcarving, housekeeping, the breeding and training of animals, the cultivation of plants, are arts; as the management of institutions, government, statesmanship, are arts; as, indeed, all human occupations are arts. As such it stands, in a classification based upon potential utility to mankind and difficulty of practice, at the head of the arts which deal with living things, and overlaps the highest division of the arts, the social. This fact should have, to say the least, an inspirational value.

Having shown the place among the arts to which education should properly be assigned, and having thus suggested its true dignity and importance, it will be helpful now, I think, to differentiate education from all the other arts, and to show, if possible, in what the art of education es-

sentially consists. This is necessary to the discovery of the principles which underlie the art of education, and is an important step in its successful application. We may begin with the consideration of two or three general truths. First, the principle of universal change.

2. The Universality of Change. — Science has made the world familiar with the thought of general and continuous change. Change is universal. All material things are in motion. The stars are not "fixed," suns and planets "wander through ethereal space," the world moves, the wind bloweth where it listeth, clouds form and reform, rains fall, rivulets trickle into streams, streams unite to form rivers, and rivers sweep onward to the sea. The waves roll and beat upon the shifting sands; the coast line is submerged, is lifted above its normal level; mountains and hills are washed and worn away. "Nothing," said Darwin, "not even the wind that blows, is so unstable as the level of the crust of this Earth." [1] The instability of the earth characterizes all things upon its surface. Plants germinate, grow, bloom, fructify, and then fall back into the realm of the inorganic. Animals live, move, and die, and their bodies disintegrate and may reappear in part in grass or tree or flower. Man is no exception to the rule: "Dust thou art, and unto dust shalt thou return." "Imperious Cæsar, dead and turned to clay, might stop a hole to keep the wind away."

[1] "Journal of Researches," p. 233.

Nowhere is the law of change better exemplified than in human society. Social institutions are devised, serve a temporary purpose, are outworn and disappear. Populations expand, migrate, diminish, expand again; or, it may be, perish. Nations wax and wane. The ever increasing number of inventions revolutionizes our modes of life. What marvelous changes characterize our own society! With what lightninglike rapidity the scenes shift! "Not many generations ago," said the old declamation, "where you now sit, encircled with all that exalts and embellishes civilized life, the rank thistle nodded in the wind, and the wild fox dug his hole unscared. Here lived and loved another race of beings. Beneath the same sun that rolls over your head the Indian hunter pursued the panting deer; gazing on the same moon that smiles for you, the Indian lover wooed his dusky mate. Here, the wigwam blaze beamed on the tender and the helpless, and the council fire glared on the wise and daring. Now, they dipped their noble limbs in your sedgy lakes, and now, they paddled the light canoe along your rocky shores. Here, they warred; the echoing whoop, the bloody grapple, the defying death song, all were here; and when the tiger strife was over, here curled the smoke of peace." But all this has changed like "the baseless fabric of a dream."

Men now living have witnessed almost the entire development of this country. A century ago we had no railroads, no steamships, no telegraph, no postage stamps,

no telephones, no phonographs, no street cars, no electric lights, no threshing machines, no reapers, no mowing machines, no kitchen ranges, no sewing machines, no — but why add to the list? The change has been kaleidoscopic. And changes will continue "through all the circles of revolving Time."

> "Before my breath, like blazing flax,
> Man and his marvels pass away,
> And changing empires wane and wax,
> Are founded, flourish and decay."

We live in a world of change, and there are no exceptions to the law.

3. Change and Phenomena. — Change, however, is but another word for phenomena. "Phenomena," says Ward, "consist entirely of changes, *i.e.* of actual alterations of location in the objects that make up the universe, . . . it is a convenient as well as a correct view to regard the perceptible universe as made up of changes, which alone constitute the subjects of intellectual contemplation as well as the sole objects of conscient interest." [1] Phenomena, then, are necessarily the subject matter of all the sciences, and the domain of all the arts.

Conceiving the world, then, as a vast mass of phenomena, it will be easily seen that it may be separated into two great divisions — the phenomena that result

[1] Ward, "Dynamic Sociology," New York, Second Edition, 1897, Vol. II, p. 77.

from the operation of purely natural causes, and the phenomena that are occasioned by conscious, purposive action on the part of intelligent beings. These two divisions may be respectively designated as natural and artificial. The motions of the planetary bodies, the movements of the tides, the formation of clouds, the fall of rain, the natural growth of a tree, the grass, a flower — these and the like are natural phenomena; while the building of a house, the production of food and clothing, the irrigation of desert land, the production of crops, the building of a railroad, the digging of a canal — in fact all the works of civilization — are artificial phenomena. Here we have clearly suggested the distinction between Nature and Art. Nature includes "all phenomena that take place according to uniform laws, obey the mechanical axioms, and are impelled by true natural forces. Such phenomena are capable of being investigated, their results may be predicted, and the phenomena themselves may be modified at the will of rational beings who have made themselves acquainted with the laws that underlie them." Art, on the other hand, is manifested only in those "phenomena which result from such modification and control of natural phenomena by such rational beings."[1] Nature, then, is the subject to which art is applied, and the essential nature of art is its control and modification of natural

[1] *Op. cit.*, pp. 105–106. Here may be found a full discussion of the subject.

phenomena. The various divisions of the arts are concerned with corresponding divisions of such phenomena.

Now, we saw, in the preceding chapter, that the arts fall naturally into three great divisions, the physical, the vital, and the social. Since each division of the arts applies to a special field of phenomena, there must also be three corresponding divisions of natural phenomena: the phenomena of inorganic nature; the phenomena of plants, animals, and man; and the phenomena of social groups. The phenomena of organic life, however, particularly in its higher manifestations, are both biological and psychological; or, perhaps, it would be better to say, biotic and psychic, since these latter terms do not imply a treatise upon such phenomena. Each of these divisions is of such scope and importance as to deserve, in a classification of phenomena, a place coördinate with physical and social phenomena. Accordingly we may analyze the great universe of change, the entire domain of natural phenomena, into physical, biotic, psychic, and social.

4. **The Causes of Phenomena.** — All the changes or phenomena of the world are the result of causes. They are effects. There is no effect without a cause. Hence universality of change implies a like universality of cause.

Now what are the causes which produce phenomena? Here we come upon a question that is deeply philosophical, but into which, fortunately, it is not necessary

to enter for our present purpose. But it is necessary to employ some term to designate the universal cause of change. I know of no better word than "force."[1] There are objections to the use of this term. We do not understand the essential nature of phenomena, and they are not finally explained by reducing them to the category of force. Our object, however, is not philosophical, but practical. We are not seeking the explanation of phenomena; we are merely interested in the fact that they are subject to some extent to modification and control by intelligence. So, while for philosophic purposes the idea of force may be of questionable value, in discussing the arts we may adopt the common-sense mode of speech and employ the term force to designate the universal cause of change.

Force, then, we shall define as that which produces or tends to produce change. There is universal and ceaseless change, hence, there must be universal and persistent force. Change implies motion. Objects move only when impelled to do so. The changes, for instance, which occur in the inorganic world, are produced by forces of attraction and repulsion, gravitant and radi-

[1] A term sometimes employed to designate that which occasions change, or will occasion it if counterbalancing forces are overcome, is "energy." But the word "force" is better for our purposes, particularly as its use is familiar in connection with the idea of physical, vital, and social phenomena. We are not in the least concerned, in this discussion, whether Force is the *real* cause of change or merely "an arbitrary conceptual measure of motion without any perceptual equivalent."

ant forces. The physical and chemical changes that take place in the structure of living things, resulting in growth, are occasioned by corresponding forces. The expression "social movements" is of frequent occurrence in our literature, but the minutest "social movement" could not take place without the operation of forces that are called social. There can be no change, indeed, without force, any more than there can be an effect without a cause. The universality of change implies a like universality of force.

Force, then, being universal, permeates the whole realm of art. It occasions all the changes of the physical, biotic, psychic, and social world. Inasmuch as its manifestations are solely in the phenomena produced, we may analyze force into a plurality of forces corresponding to the previous-named divisions of phenomena. That is, our classification of phenomena in the preceding section is also a classification of the various kinds of force. Forces, then, like phenomena, are physical, biotic, psychic, and social. The physical forces are those that produce physical change. They are gravitation, heat, light, electricity, magnetism, and the like. The biotic forces are those that occasion growth and development in plants, animals, and man. They are the biological or life forces. The psychic forces are those represented by the mind, or more particularly by the affective faculties of the mind. The social forces are the impulses, desires, and interests of men, to which

may be ascribed the changes which take place in society.

The study of the physical forces in their various manifestations is the peculiar function of the physical sciences, chemistry, physics, etc.; and the direction and guidance of these forces into channels of human advantage is the particular province of the mechanical arts. So, also, the investigation of the biotic, psychic, and social forces falls within the realm of the biological, psychological, and social sciences, and their control is the proper object of the corresponding arts.

5. **The Common Characteristic of the Arts.** — We have now arrived at a point in the discussion from which the common element of all the arts is revealed. Since all human occupations are arts, there must be some characteristic common to them all, otherwise they could not be classed together as arts. This common characteristic is the modification of phenomena through the control of force. A few illustrations will help to make this clear.

What is the essential nature, for instance, of the task undertaken in a mechanical art, let us say in its dynamic manifestation, that is, invention? The inventor recognizes the existence of some natural force, such as steam or electricity, and concludes that it may be employed for some practical purpose. He may not, does not, understand its real nature, but he devises an apparatus or machine by means of which he may change its direction, or store it up and liberate it at will. That is to say, his

primary object is the manipulation or control of a particular form of force in order to make it serve a human purpose. He succeeds, and the result is a steam engine, or a motor. His invention is merely a device for the control of a natural force.

In such a simple matter as the irrigation of a field exactly the same thing is illustrated. There must first be a knowledge of the conditions — that there is a supply of water above the level of the field, that it will flow down upon the field if intervening obstacles are removed, that, by digging a ditch of the proper proportions and with a continuous incline, a sufficient head of water may be secured. In other words; there must be a recognition of the possibility of controlling the natural force of gravity and thus of making nature do the work of carrying and distributing the water. So a ditch is dug, and when it is completed the water flows, impelled only by gravity, and the work is done; a natural force has been controlled by intelligence. All the physical arts, even in their modern perfection, simply represent man's success in the control of the physical forces.

Now take as a further illustration the horticultural art. What is the gardener, or the farmer, really trying to do when he takes a seed, puts it into the ground, awaits its germination, and cultivates the growing plant? He, too, is aware of the existence of peculiar natural forces, the forces inherent in the plant, and which, if left alone, would produce a certain kind or amount of

development, but not exactly what he desires. He knows that the conditions surrounding the plant affect the efficiency of these forces and the consequent growth of the plant. So, by determining these conditions, he controls in a measure the operation of these peculiar forces, and causes them to produce in flower, foliage, or fruit, something quite different from the product of nature acting alone. He, too, is merely seeking to control purely natural forces.

And so, in the social arts, as, for instance, in the art of legislation, the primary purpose is to control the passions, desires, and interests of men, again purely natural forces, so as to obviate unnecessary and wasteful conflict, and thus enhance the progress of society.

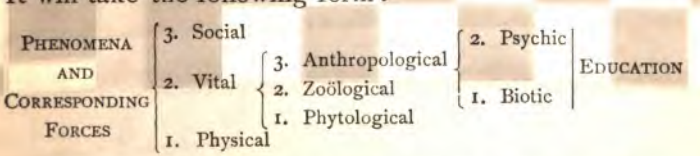
The common and fundamental characteristic of all the arts, then, is their control by intelligence of one or more of the forces exerted in the production of natural phenomena. Art is the control of force.

6. **Education the Control of the Educational Forces.** — It will now be easy to see the fundamental nature of the "art" of education. We have observed that the world of change or phenomena may be divided into physical, vital (including biotic and psychic), and social phenomena. Since to these several divisions of phenomena alone can "art" be primarily applied, the special field of educational phenomena must be included within them. In assigning education to its proper place among the arts, as was done in the preceding chapter, it was shown that this

field lies chiefly in the realm of vital phenomena and overlaps into the social. If, however, we limit our conception of education to its individual aspect and to man, the phenomena with which it deals lie wholly within, and are coextensive with, the anthropological division of vital phenomena. And since man is both body and mind, manifesting both bodily and mental changes, the phenomena of education are both biotic and psychic.

But biotic and psychic changes in the individual are results and indications of certain biotic and psychic forces. There can be no modification of these changes, except as affected by such forces. Education, then, as an art, is simply the attempt to modify a special class of phenomena (the educational) through the control of a special set of forces (the educational). Its primary, indeed its sole, function, is the control of force.

The foregoing analysis of phenomena and force, and the special field and function of education, may be graphically indicated by a diagram similar to the one employed in representing our analysis of the arts (p. 20). It will take the following form:



7. **Conclusion.**— The art of education, then, is a possibility only within the realm of living things, and there only to a limited extent. Possibly it may be exercised

upon higher forms of animal life. We need not stop to discuss that question. We confine our attention to man. Now, the possibility of education lies wholly in the fact that the life of man presents natural phenomena, biotic and psychic, which are subject to modification. A child if left alone will, by virtue of purely natural and inherent forces, develop into a human being of some kind or other, manifesting a certain strength of mind and body, and a certain character. But experience early showed that the results following from letting the child alone are more or less unsatisfactory. It is likely to become dishonest, lazy, cruel, criminal, anti-social. Hence, society early took the matter in hand, established the school (an invention), and seeks by means of it to determine the child's development, and the mental, moral, and physical qualities it is to manifest in later life. "Education," says Compayré, "is *the sum of the reflective efforts by which we aid nature* in the development of the physical, intellectual, and moral faculties of man, in view of his perfection, his happiness, and his social destination." [1]

The analogy between the education of a child and the cultivation of a plant, between child culture and plant culture, has been frequently drawn. It may now be seen that these arts are more than analogous; they are in a sense homologous. Both are directed toward influencing the growth and development of a living

[1] Compayré, G., "Lectures on Pedagogy," pp. 12, 13. The italics are mine.

thing; both seek to control organic changes; both are limited to the transformation of the environment; both must observe the laws of growth, and both seek to modify the products of nature. But while the resemblances between education and the other vital arts, as, for instance, of the field and the garden, are more conspicuous than those, let us say, between education and the mechanical arts, as of the shop and the studio, still there is a fundamental similarity existing among them all, even the most remote. They are all attempts to control the forces manifesting themselves in their own special fields of phenomena.

The essential nature of education, then, appears in its effort to control a particular set of forces; namely, the educational. These are the forces which occasion the phenomena of physical, mental, and moral growth. Education may, therefore, be defined as the art of controlling the educational forces in order to effect progressive changes in the physical, mental, and moral life of the child. To ascertain what these forces are, and to devise and apply the best methods of controlling their operation to the end of producing an ideal type of human being, is to succeed in the practice of the art of education. Let us, then, undertake to segregate, and so far as possible define, the educational forces. This will occupy our attention in the next chapter.

CHAPTER III

THE DYNAMIC ELEMENTS IN EDUCATION

Using sweeping terms and ignoring exceptions, we might say that every possible feeling produces a movement, and that the movement is a movement of the entire organism, and of each and all its parts.

— WILLIAM JAMES.

Motives are processes always accompanied by feelings, and these feelings turn out to be those elements of the motive in which the real cause of activity is contained. We would not will a thing if we were not stimulated by feelings. — WUNDT.

1. **The Fundamental Fact in Education.** — In showing that education, considered as an art, is essentially concerned with the control of a particular set of forces, we incidentally determined, in a general way, what these forces are. They are those, and those only, which occasion bodily and mental change. Both the scope and the possibilities of education, so far as the individual is concerned, are, as we have seen, limited to the possibilities of modifying the phenomena of individual life. For designating such phenomena, however, we have another expression, which is far more familiar in educational discussion. That expression is "activity." The phenomena of individual life are the various activities of the organism, bodily and mental. Activity is also the necessary requisite of development. There

can be no development without it. Thus the word "activity" has a double significance in education. As applied to the child, it is synonymous with educational phenomena, covering, as it does, all the results produced by the educational forces, and it is itself the necessary concomitant and basis of development. Activity is the dynamic principle of life. It is therefore the fundamental fact in education.

2. Kinds of Activity. — Adopting the word "activity," then, in further discussion instead of "phenomena," it is desirable to introduce another slight change in our terminology. The various forces and consequent changes of individual life we divided into biotic and psychic. These terms are too general. They do not focus attention upon the special subjects of change in education, the mind and the body. I know of no satisfactory substitute for the word "psychic," but to designate bodily phenomena, or activities and forces, the word "somatic" (from *soma*, body) is preferable to the term hitherto employed for that purpose.

The activities, then, which are the scientific groundwork of education, being bodily and mental or psychical, the corresponding forces which the art of education undertakes to control are somatic and psychic. The somatic forces include all that produce changes in bodily organization, structure, and habits. The psychic forces are those which occasion mental changes, manifesting themselves in sensation, emotion, ideas, knowledge, and

character. It is impossible, of course, to separate entirely the manifestations of the one division from those of the other. Body is mind and mind is body. But the distinction is a customary one, and it is sufficiently accurate for our present purpose.

3. **The Somatic Forces.**— The somatic forces are those that produce chemical and physical changes in the organism, resulting in metabolism, growth, and development. They are the forces that form and fashion the body. They are purely natural forces, as much so as steam or electricity, and they are subject to the same control. If we can conceive of educational effort put forth with the sole object of improving the body and bringing it to a form and condition which approximates, as nearly as possible, a state of perfection, the art of education will have become in that case and to that extent the art of controlling the somatic forces. Such educational effort would necessarily be expended primarily upon a careful provision and supervision of food, clothing, air, water, sleep, exercise, work, play, etc. The most careful attention would be devoted to conditions of temperature, sanitation, etc., and an attempt would be made to remedy a bodily defect as soon as it was discovered. In short, scientific attention would be devoted to everything that is known or supposed to effect bodily changes.

Of course, attention to the nourishment of the body, sanitation, etc., and to the modes and times of exercise, is not the only method of controlling the forces which

affect the development of the body. Psychologists have shown that all the emotions are somatic in their effects. Love, hate, joy, grief, fear, shame, and anger, as well as the subtler esthetic feelings, produce bodily reactions. Fear paralyzes; even joy may kill. The most fleeting emotion causes an afflux of blood to the brain. The most insignificant sensorial stimuli are said to result in more or less stimulation or inhibition of the action of the various organs of the body. Thus respiration, digestion, the circulation of the blood, the removal of waste material, all the physiological functions, in fact, are influenced by mental states. The effort to perfect the body, then, could by no means disregard the mind.

Because of the intimate relationship existing between body and mind, it is difficult, in fact impossible, to draw a hard and fast line of distinction between the somatic and the psychic forces. We shall be sufficiently precise, perhaps, if we say that the molecular and muscular movements controlled by the sympathetic nervous system, as well as the physical and chemical changes already referred to, are occasioned by the somatic forces; while such movements of the body as are or may be brought under the control of the will (voluntary actions) should be included under those occasioned by the psychic forces. Even as thus drawn, the line will vary.

The control of the somatic forces is a phase of education which has hitherto been largely neglected. Locke is said to be the first educator to write a con-

secutive and methodical dissertation on the food, clothing, and sleep of children. There is a strong movement just at present in the direction of remedying this neglect; but still little has been done, in the school or in the home, and especially in the great system of elementary education which the State provides. Food values, just what is necessary to produce muscle or nerve, how and when food should be varied, and the like, are subjects which one may hear discussed in cattle and hog raisers' associations, but they have not yet received due attention on the part of those who are engaged in the task of bringing up children. "The fattening properties of oilcake," says Spencer, "the relative values of hay and chopped straw, the dangers of unlimited clover, are the points on which every landlord, farmer, and peasant has some knowledge; but what proportion of them know much about the qualities of the food they give their children, and its fitness to the constitutional needs of growing boys and girls? . . . Of a score of townspeople few, if any, would prove ignorant of the fact that it is undesirable to work a horse soon after it has eaten; and yet, of this same score, supposing them all to be fathers, probably not one would be found who had considered whether the time elapsing between his children's dinner and their resumption of lessons was sufficient." [1]

[1] Spencer, "Education, Intellectual, Moral, and Physical," Humboldt Edition, Chap. IV, p. 305.

It seems obvious enough that the production of a strong, healthy, vigorous, efficient generation of men and women is impossible without systematic control and direction of the somatic forces. It is patent that this control is neglected to some extent by the school and the home, and to a larger extent by society at large. The inference, then, is unavoidable that society does not care deeply for the production of such a generation. That is to say, society is not sufficiently interested in education. After all is said about the defects of teachers, their lack of preparation, etc., the fundamental difficulty with modern education is the lack of public interest in the great art whose possibilities are as yet but dimly perceived. Surely the same scientific attention, if not more, with due regard to necessary limitations, should be devoted to the raising of children that is now directed to the production of prize-winning hogs, fancy cattle, and two-minute horses.

4. **The Psychic Forces.** — In addition to the physical movements involved in the growth and repair of the body, life is made up of actions, voluntary and involuntary. The strictly involuntary actions are few in number, and need not, in this connection, arrest our attention. Voluntary action presents the most conspicuous feature of life. We go here and there; we apply ourselves to this or that; we sit, lounge, read, study, think; we rise, stand, walk, run, work, and rest; all voluntarily and in obedience to some impelling force.

Now, when we ask what is the cause of a given action, what is it that impels us to any particular kind of activity, the answer must be: it is some form of psychic force. The psychic forces are the great dynamic elements in human life. Let us see if we can determine what they are.

In the preceding section it was pointed out that every intellectual state is accompanied by some kind of determinate physical manifestations. This is true of a sensation, as well as of an emotion or thought. "Every impression which impinges on the incoming nerves produces," says Professor James, "some discharge down the outgoing ones, whether we be aware of it or not." And again he says, "There are probably no exceptions to the diffusion of every impression through the nerve centres." [1] The fact here suggested is of fundamental importance. We must give it further consideration to appreciate its true significance with respect to action, and consequently with respect to education. The idea may be brought out, most clearly perhaps, by quoting a page from Spencer.

"The feelings we distinguish as light, heat, sound, odour, taste, pressure, etc., do not die away without immediate results; but are invariably followed by other manifestations of force. In addition to the excitements of secreting organs, that are in some cases traceable,

[1] James's *Psychology*, American Science Series, Briefer Course, New York, 1892, Chap. 23, pp. 370–371.

there arises a contraction of the involuntary muscles, or of the voluntary muscles, or of both. Sensations increase the action of the heart — slightly when they are slight; markedly when they are marked; and recent physiological inquiries imply not only that contraction of the heart is excited by every sensation, but, also, that the muscular fibres throughout the whole vascular system are at the same time more or less contracted. The respiratory muscles, too, are stimulated into greater activity by sensations. The rate of breathing is visibly and audibly augmented both by pleasurable and painful impressions on the nerves, when these reach any intensity. It has, even of late, been shown that inspiration becomes more frequent on transition from darkness into sunshine, — a result probably due to the increased amount of direct and indirect nervous stimulation involved. When a quantity of sensation is great, it generates contractions of the voluntary muscles, as well as of the involuntary ones. Unusual excitement of the nerves of touch, as by tickling, is followed by almost uncontrollable movements of the limbs. Violent pains cause violent struggles. The start that succeeds a loud sound, the wry face produced by the taste of anything extremely disagreeable, the jerk with which the hand or foot is snatched out of water that is very hot, are instances of the transformation of feeling into motion; and in these cases, as in all others, it is manifest that the quantity of bodily action is proportionate to the

quantity of sensation. Even where, from pride, there is a suppression of the screams and groans expressive of great pain (also indirect results of muscular contraction), we may still see in the clenching of the hands, the knitting of the brows, and the setting of the teeth, that the bodily actions developed are as great, though less obtrusive in their results. If we take emotions instead of sensations, we find the correlation and equivalence equally manifest. Not only are the modes of consciousness directly produced in us by psychical forces retransformable into physical forces under the form of muscular motions and the changes they initiate, but the like is true of those modes of consciousness which are not directly produced in us by the psychical forces. Emotions of moderate intensity, like sensations of moderate intensity, generate little beyond excitement of the heart and vascular system, joined sometimes with increased action of glandular organs. But as the emotions rise in strength, the muscles of the face, body, and limbs begin to move. Of examples may be mentioned the frowns, dilated nostrils, and stampings of anger; the contracted brows, and wrung hands, of grief; the smiles and leaps of joy; and the frantic struggles of terror or despair. Passing over certain apparent, but only apparent, exceptions, we see that whatever be the kind of emotion, there is a manifest relation between its amount, and the amount of muscular action induced; alike from the erect carriage and elastic step of exhilaration, up to

the dancings of immense delight, and from the fidgetiness of impatience up to the almost convulsive movements accompanying great mental agony. To these several orders of evidence must be joined the further one, that between our feelings and those voluntary motions into which they are transformed, there comes the sensation of muscular tension, standing in manifest correlation with both — a correlation that is distinctly quantitative; the sense of strain varying, other things equal, directly as the quantity of momentum generated." [1]

This passage from Spencer is arbitrarily selected. A similar passage might be chosen from almost any recent and complete discussion of psychology. The whole doctrine may be summed up in the expression "all consciousness is motor." Sensations and emotions invariably produce internal activities, and, if sufficiently intense, they result in muscular contraction, movement, action. But sensations and emotions are forms of feeling. They are the species of which feeling is the genus. Speaking generally, then, we may say that it is the tendency of all forms of feeling to produce action. Feeling is, indeed, the sole cause of action. The feelings, then, taken collectively, are the fundamental educational forces, the dynamic elements in education. They dominate, in so far as these are directly controlled. The feelings, then, the psychic forces, are consequently the forces with which the art of education must be chiefly concerned.

[1] Spencer, H., *First Principles*, New York, 1885, pp. 213–214.

5. The Fundamental Educational Force. — We have now reached the conclusion that the dynamic elements in education, that is, those elements from which all voluntary bodily and mental actions spring, are the feelings; that the feelings are the causes which produce action, development, and character; and that consequently they are the chief forces to the control of which the art of education should be applied. The feelings are, of course, of different kinds — impulses, sensations, emotions, desires, etc. The art of education, then, is an effort to control not a single force, but a number of forces. Now, in any attempt to control a set of forces it would seem to be a natural as well as a wise procedure, to find among them, if possible, the most important force, a dominant force, if it exist, and devote our attention and direct our efforts primarily to the control of that. Let us see, then, if there be not a fundamental educational force, a fundamental feeling, to which the art of education may be principally if not exclusively applied.

Feeling practically, and perhaps essentially and originally, is a mere consciousness of an agreeable or disagreeable state of mind or body, that is, of pleasure or pain. "The phenomena of the mind," says Ward, "all rest primarily on sensation, that property inherent only in nerve-matter, by which it acquired a conscious susceptibility to external impressions. They are primarily divisible into two classes, agreeable and disagree-

able. The former constitutes pleasure, the latter pain. Sensitive matter always seeks the one and shuns the other. This state of being which thus inclines to seek pleasure and shun pain is denominated desire. A desire is therefore a mere inclination to experience agreeable or to escape disagreeable sensations. But, while nothing but this bare state of being exists, no result is accomplished. This state of mind will not of itself secure the object desired; it neither affords pleasure nor relieves pain. Hence, and of necessity, there is always attending, and involved in, the state of mind a tendency to *act*. The two are inseparable. A desire cannot exist without an inclination to act so as to secure the gratification of that desire. Yet it is clear that the act and the desire are not the same, since most desires are not followed by actions. But they are so intimately dependent that no act can be performed which does not spring from a desire."[1] In merely impulsive action, however, desire is not apparent. But when a satisfaction is once experienced, whether by conscious action or by impulse, it will, in the higher organisms at least, be retained in memory, and when thus recalled or reproduced it will again awaken the impulse to action. This representative feeling, with the sense of strain accompanying it, is the conspicuous form of desire, and this state of consciousness is one of the most general and prominent features of conscious mental life. Desire may originate either from sensations or ideas.

[1] "Dynamic Sociology," New York, 1897, Vol. II, pp. 321–322.

For instance, suppose a case of hunger. The mere sensation of hunger gives rise to a desire for food. An article of food is presented, and it intensifies the desire to eat. An examination of the article reveals conditions that lead the mind to the judgment that "it is not fit to eat," and this idea produces the desire to throw it away. But whether arising from sensations or opinions, desire is the mainspring of all voluntary action, the fundamental educational force.

If the foregoing be true, the art of education becomes practically the art of controlling desire; the art of inducing the child to desire knowledge, skill, and bodily perfection; the art of intensifying and directing the desires whose fulfillment results in physical and mental efficiency and in moral character. Is there, then, any general principle which may be applied in the art of controlling desire? If so, it must be regarded as a fundamental principle in education.

That there is such a principle, I think, may be easily and clearly shown. By the time a child arrives at the ordinary school age, its feelings have become associated with objects, its memory is developed, and its consciousness has consequently become a theater of desires. The evaluation of things presented to its consciousness, with respect to their probable effect upon its pleasurable feelings, which are the sole aim of its existence, has long since begun. Whatever promises to promote the sum total of these pleasurable feelings sustains, for the

time being, a vital relation to the child's life. Such an object, fact, idea, or feeling is seen to be worth something personally; it is desirable. Desire, then, implies an object, material or spiritual, and an unsatisfied state of consciousness due to its own unfulfillment.

Now, the fact that there is a painful element in desire, or at least a promise of satisfaction in its fulfillment, gives, with respect to that which satisfies it, or seems likely to do so, a peculiar state of consciousness, or feeling, ordinarily described as interest. "Our pleasures and pains," says Sully, "make up the *interesting* side of our experience. The objects of the external world only have a value for us in so far as they affect our sensibilities or touch our feelings." [1] Interest, then, accompanies desire. The child "takes an interest" in anything that promises to relieve the strain of the "tendency state" always occasioned by desire.

Interest, then, while it does not always awaken desire, invariably accompanies it. Desire, indeed, is but a phase of interest. If we can control the interest of a child, we have thereby controlled his desires. This, then, is the principle to which we are led: *Desire, the fundamental force in education, may be directed through interest.* Education thus becomes primarily the art of controlling and directing the feeling known as interest.

6. Education Chiefly Concerned with Interest. — We may then sum up the substance of this chapter as follows.

[1] "Teachers' Handbook of Psychology," New York, 1887, p. 279.

Education is the art of controlling the educational forces. These forces are somatic and psychic. The control of the somatic forces, although to a limited extent possible through external improvement of physical conditions, is chiefly effected by inducing the mental states which lead to the proper activities. The psychic forces are therefore the forces with which the art of education is chiefly concerned. These are the feelings. The characteristic state of feeling is that evidenced in voluntary action by desire. Hence, desire, using the term in a broad sense, is the fundamental educational force. Desire, however, is invariably accompanied by interest. The control of desire is effected by the control of interest. Hence the art of education should be devoted, primarily and chiefly, to the control of interest.

School life and life in general consist in the realization of interests. The world is so full of interesting and desirable things that life consists practically in the pursuit of them. Throughout our entire existence we are so generally engaged in the pursuit of a succession of desirable ends and objects that we may almost say that interest and conscious existence are practically coextensive. Life may be represented not inaptly as a current of interest flowing unevenly in an irregular channel, now confined within its banks, now quietly spreading indifferently through marsh and field, and now with the same indifference pouring far and wide a devastating flood. It is the business of education to restrain this

current, to restrict it within proper limits, and to direct its flow toward those immediate ends, the realization of which contributes to well-being, individual and social, and toward that ultimate end that is usually expressed by the word "character."

CHAPTER IV

INTEREST

True interest alone is the great mainspring that works long and surely. — ROUSSEAU.

Interest is the greatest word in education. — SCHURMAN.

1. **The Nature of Interest.** — Having reduced the art of education, which seems at first thought so complex, to the simple process of controlling interest, we must now inquire somewhat closely into the nature of interest. The word is used in many different senses. We say, "I feel, have, or take an interest"; "a subject possesses, or is full of, interest"; "it will be to my interest," etc. Thus it is applied to the object of interest as well as to the subjective condition occasioned by the presence of the object; to an abstract quality; to a biological or psychological effect; and to designate advantage, profit, or gain. All are familiar with the peculiar use of the word in commercial life, and of its plural form in modern political and economic discussion. When we speak of interest as that condition of consciousness that is aroused in us by the presence of an interesting object, there is, of course, a reference to the excitation of a certain amount of feeling. It is with this feeling, the sub-

jective phase of interest, that we are now chiefly concerned, and to that phase of it we shall, for the present, confine our attention.

No special knowledge of psychology is required to recognize that there are two kinds of interests, native and acquired. A normal child, without any education whatever, will manifest a large number of interests of one kind or another; or, perhaps it would be better to say, it will manifest interest in a large number of things. A child is a bundle of appetites; and anything that promises to satisfy an appetite will engage its attention and incite interest. Its first interests are in whatever seems adapted to satisfy its craving for food. Very soon, however, it manifests an interest in moving objects, in anything that is strange or novel, in striking colors, and the like, and when it reaches the age of understanding it is invariably interested in stories that contain an element of mystery or adventure. All these are native interests. They are inherited. They are a part of the child's nature.

Now these native interests all bear a close relationship to elemental needs, to individual and social preservation. Take, for example, an interest that is naturally manifested, not only by children, but also by adults, even though it be temporary, namely, the interest in moving objects. This is plainly an inherited and instinctive interest. It is found among the lower animals. The incident of Darwin's dog illustrates it. It was doz-

ing on the lawn. An open umbrella was before it. It betrayed no interest until a breeze sprang up and the umbrella began to move. Then the dog commenced to growl and later to bark. An interest manifested itself as soon as the object began to move. An audience is listening to a speaker. Some one enters, or rises to go out. Instinctively heads are turned. If we wish to realize how much this interest has had to do with the preservation of life, we have but to reflect upon the dangers that beset wild animals, and the attitude that they must assume toward the objects about them. How watchful they are; how attentive to strange sights and sounds! They must be so, otherwise they would soon fall victims to their enemies. A moving object may be an enemy. An animal not naturally disposed to devote attention to moving objects would soon be eliminated in the struggle for existence. The manifestation of such an interest by wild animals or wild men is an element in survival.

The interest just described is typical of all the native interests. They hold, or have held in the evolution of the race, a special and intimate relation to self-preservation and the satisfaction of the elementary wants. They originated in accordance with the principle of advantage, and persist or decay in correspondence with their individual or social value. The use of some of them is not now apparent. As the body still contains vestiges of organs once serving a useful function, so the mind still

preserves relics or fragments of interests that were essential to life in the days of our remote progenitors. Originating spontaneously, these interests were seized upon by natural selection and became so deeply ingrained in the organism that their presence is felt and displayed even to-day. The objects of such native interests must have been, at some time in the course of evolution, of serious concern to the maintenance and progress of individual or social life.

In the adult person, however, and especially among civilized people, there will always be found a large number of interests that are the products of individual experience. Objects, ideas, sciences originally repulsive have somehow come to possess an absorbing interest. An interest thus permanently manifested in anything that is not natively interesting is an acquired interest.

If now we turn to the derivative and acquired interests, we shall find that in every case there is the same relation to preservation, well-being, or satisfaction, as was found in the case of native interests, or a similar relation. We develop an interest in things which have been found to be, or are thought to be, capable of satisfying a want, that is, of giving relief from a disagreeable feeling. In a like manner we become interested in whatever promises to increase, or threatens to decrease, the sum of agreeable states of mind. Such things obviously hold a special and intimate relation to the self which sepa-

rates them from all other things. "Intimate relation to the self," — that describes exactly the object of interest. If we examine our own minds to discover why certain things interest us, why some things interest us at one time and not at another, and why some things interest us not at all, we find that in every case the things that interest us touch us closely. They are things that we can use, or things that of themselves furnish immediate satisfaction. They come home to us. They are of some personal consequence. How quickly, for instance, a conversation that possesses no interest for us at all suddenly becomes interesting if something is mentioned that has an intimate relation to ourselves! A good example is furnished by Dickens, in "Nicholas Nickleby." Nicholas walked into a coffee room, where, as Dickens tells the story, "There was a rather noisy party of four gentlemen in a box by the fire-place, and only two other persons present — both elderly gentlemen, and both alone. Observing all this in the first comprehensive glance with which a stranger surveys a place that is new to him, Nicholas sat himself down in the box next to the noisy party, with his back toward them, and postponing his order for a pint of claret until such time as the waiter and one of the elderly gentlemen should have settled a disputed question relative to the price of an item in the bill of fare, took up a newspaper and began to read." He had not read twenty lines, and was in truth half dozing, when he was

startled by the mention of a name. Why did a name attract his attention? Why was his interest in the conversation aroused? It was the name of his sister. He thought the conversation was coming close to him. If, after listening for a moment, he had discovered that the name pronounced was really that of a stranger, his interest would probably have vanished and he would soon have been dozing again.

And so if you find yourself interested in a conversation, a book, a picture, a play, a sermon, no matter what it is, you will find, on reflection, that it is because there is something there that touches your life, something that has a meaning, a consequence, a significance, a value for you. The common element in all objects of interest is their power, real or supposed, to help or hinder self-realization, — to satisfy a desire, to minister to our wants, to prevent their satisfaction, or in some manner to affect the recognized immediate or remote needs of our existence.

Life is a constant demand, a longing, a craving. The one continuous desire is for self-expression, or, as some may prefer, self-realization. Whatever promises to promote, or threatens to interfere with, such realization becomes by virtue of that fact a thing of interest. Interest, then, as it is manifested in an object, may be defined subjectively as that form of feeling which arises upon the recognition by the self that the attainment, or the evasion, of the object is necessary to its own realization. It is a

feeling of the unique personal significance of an object, idea, or situation.[1]

2. **Kinds of Interest.** — As already pointed out, interests are both native and acquired. But there are other divisions of interest, which will be found to be of great importance when we come to discuss the doctrine of interest. One of these is the customary separation of interests into positive and negative. A positive interest is one that is derived from the consideration of an end or object that promises pleasurable feeling and that is desired for itself. A negative interest is one that arises from the repellant character of the thing contemplated. The terminus of such interest promises a disagreeable mental state, hence negative interest leads to the avoidance of the object or situation in which the interest is manifested. Positive interest manifests itself in desire, negative interest in aversion.

Still another division of importance is that of direct and indirect interest. An interest is direct when it attaches itself immediately to the object that awakens it. A child is interested directly in its toys and games. A good story awakens a direct interest in the characters

[1] De Garmo employs the word "worth" instead of "significance" in defining interest ("Interest and Education," New York, 1902, p. 28), and so do others. But "worth," or "value," does not seem to recognize sufficiently the form of interest known as negative, for which see § 2. Dewey defines interest as "impulse functioning with reference to an idea of self-expression" (*op. cit.*, p. 22), but that seems to be the cause (or shall we say the concomitant ?) of interest rather than interest itself.

involved. All native and acquired interests are direct. An indirect interest (also called secondary or mediate) is such as is awakened in an object because of the relation that that object sustains to a desired end. A boy may not be interested in digging in the ground for its own sake, but if the object is to find bait to be used in fishing, the digging presents an entirely different aspect to him. It then becomes interesting to him as a means. Promise a child an excursion in the woods, and he will at once manifest an interest in whatever is necessary to prepare for the excursion. Even the most disagreeable tasks, if seen to be necessary to the attainment of a desired end, become interesting. A genuine and intelligent interest in an end to be achieved (a direct interest) necessarily awakens an interest (indirect) in anything recognized as a necessary means to that end. Interests, then, are native and acquired, positive and negative, direct and indirect. The distinctions between these various forms of interest should be kept constantly in mind.

3. **Other Forms of Interest.** — Although it is not of special importance to our purpose, we may call attention in passing to the Herbartian analysis of interest, as determined by its sources. These sources are Nature and Society. From Nature, according to Herbart, we derive three kinds of interest: empirical, speculative, and esthetic. An empirical interest is that which arises from the mere variety, novelty, and superficial attractiveness of the objects of nature. A speculative interest is

manifested when we begin to ask questions about the relations and causal connections of phenomena. An esthetic interest follows from the contemplation of whatever is beautiful, sublime, or grand.

An illustration may help to discriminate these different forms of interest. Once in passing through the woods I observed a bird limping and fluttering along among the leaves. I stopped to look at it. The novelty of its action attracted and interested me. This was an empirical interest. I concluded that it must have a nest near by, and searched until I found the nest. In the nest were four eggs, three of them beautifully marked, and one plain in color and much larger than the others. I examined the eggs with interest in their form and color. This was an esthetic interest. But I began to wonder what sort of bird had laid the large egg in the nest of another bird. Was it a cow-bird or a cuckoo? My interest at once became speculative.

From Society, according to Herbart, we derive interests that are sympathetic, social, and religious. A sympathetic interest is aroused by putting ourselves in the place of another who suffers or enjoys. It is the basis of friendship, and is the sort of interest that we manifest in the characters of a play or a story. A social interest is that which is felt in the well-being of a family, a club, the community, the state, the nation, or any form of social aggregate. Upon this interest depends our public spirit, our patriotism, our cosmopolitanism. Finally a

religious interest is manifested in the Deity, or in whatever corresponds to our conception of the great Power outside of ourselves that makes for righteousness.

It will be observed that in this classification Herbart confuses the sources of interest with the forms of interest. Empirical, speculative, and esthetic interests may be derived from art or society, as well as from objects of nature. The real sources of interest are things, — things material and intellectual, — and of these we shall speak when we come to discuss the environment, natural and artificial. The natural environment is nature, pure and undefiled. The artificial environment is nature as modified by man. Both of these sources should be drawn upon in education. An interest should be aroused in the whole environment. Interest is life, and the breadth of life is measured by the range of interest. He who finds most interest in the largest number of sources is most a man. Hence, Herbart rightly attaches great importance to the development of a many-sided interest.

4. **Summary and Conclusion.** — Interest is a form of feeling awakened by a recognition of the peculiar relationship of a thing to the fortunes of the self. It is of many different kinds, and there are different bases of analysis. The kinds that are of most importance in this discussion are the following: native and acquired, positive and negative, direct and indirect. The interests of the division last named may also be called immediate and mediate, or primary and secondary.

As interest is primarily a feeling, and feeling is the dynamic element in life, there must be an impulsive element in interest. This element is in fact the motive to all conscious action. We strive after the objects and ends that appear to us significant with respect to the conscious purposes of our own lives — endeavoring to experience them and make them a part of ourselves if they promise to promote these purposes, or to evade them if they threaten to thwart us. Hence life is a continuous evaluation of objects and experiences on the basis of their personal significance, and the interest resulting from such evaluation is the determinant of activity and of life.

The chief task of education, then, is to awaken in the child this sense of personal significance with respect to all the approved subjects and activities of the school. A child is a perpetual interrogation. It brings to every task required, every lesson to be learned, these questions: What is this thing worth to me? How does it affect me? The teacher who is wise enough to present only that which is really worth something to the child, and is skillful enough to lead the child to recognize and feel its worth, is the successful teacher.

CHAPTER V

INTEREST AND THE PROBLEMS OF EDUCATION

Interest! One always returns to that in whatever way one may be treating the problem of education. — CLAPARÈDE.

The problem which lies before us is to study out . . . the true relation of the principle of interest to those long recognized and well established canons suggested by the familiar terms, acquisition of knowledge, intellectual discipline, attention, memory, imagination, development of will power and growth in character. — C. A. MCMURRY.

1. Education and Problems of Interest. — Education, then, as the art of human development, reduces itself practically, as has been shown, to the control of interest. It is the art of determining the quantity, quality, and intensity of the interests that, when translated into activity, form conduct, character, and life. This art involves not merely the supplanting of one object of interest by another and a higher object, but also the stimulation, encouragement, intensification, and expansion of such native interests as are commendable, and the discouragement and elimination of those interests that, in their final manifestations, are hurtful to the individual and to society. To determine the nature, scope, and intensity of interests is practically to determine life. Hence the problems both of individual and

social life are largely problems of interest. This is especially true of the problems of education.

In order to see that the chief problems of education are primarily and essentially problems of interest, we have only to consider the fundamental nature of the more important problems that necessarily present themselves in the work of education. Take, first, the problem of attention.

2. **Interest and Attention.** — The problem that first presents itself, and is continually present in the school, is that of securing attention. To secure attention and to direct it to worthy objects are two of the most obvious, as well as two of the most important, of the difficulties that are encountered in the work of education. Without attention words fall upon deaf ears, instruction is valueless, the powers of the mind are not brought into play. First of all, then, and throughout the entire work of the school, the teacher must engage the attention of the children.

The power that children possess on entering the school is chiefly that of involuntary or spontaneous attention. They bestow their attention upon this, that, or the other, without regard to educational effects. Even this power is unsteady and vacillating. But they have that power, and if the teacher finds satisfaction in merely "keeping school," the problem of attention will solve itself, for the children will attend to whatever may be attractive by nature.

But the problem of the school necessarily involves the act of attending to many things that are not of themselves engaging to children. That is to say, the art of education must be directed, so far as attention is concerned, to the development of voluntary attention.

Now, the most direct method of drawing the attention to what is not of itself attractive is by request or command. How often do we hear in the schoolroom, "Now please let me have your attention." If the request is not sufficient, it is followed by a command. This is good as far as it goes. In the school, as in the army, obedience to the command "Attention!" means a certain attitude that is conducive to attention. It is well, for certain psychological reasons, to insist on that attitude, but a teacher soon learns that, to secure attention, and to insure its return to the object until a habit of attention is formed, something else is necessary. Let us see what this is.

As already suggested, there are two generally recognized kinds of attention, — spontaneous, natural, or involuntary attention, and voluntary or artificial attention. Involuntary attention involves no effort. Voluntary attention requires an act of the will. It is accompanied by the feeling of effort. It is "a gift of nature," strong in some, weak in others. Now, if we examine the nature of those things to which attention is directed without an effort, we shall find that in every case they possess the element of interest. "Man, as an animal," says Ribot,

"spontaneously bestows his attention only on that which touches himself, which interests him, which produces in him a state whether agreeable, disagreeable, or mixed." Naturally, then, children attend only to that which interests them.

The problem of the school, however, as said before, is to create voluntary attention, to secure attention to things upon which it would not be spontaneously bestowed. The more one thinks of this, the more important will it appear as a problem of the school. How is this to be done? The answer is, by giving to such things the same quality that naturally engages attention; that is to say, through bringing the child to a consciousness of the relation that they sustain to his own needs. "The process by which voluntary attention is produced," says Ribot, "is reducible to this one formula: Rendering attractive by artificial means that which is not so by nature; giving an artificial interest to things that have not a natural interest."[1] We see, then, that the problem of attention is at bottom a problem of interest. If interest be aroused in that to which attention is sought to be directed, attention will take care of itself. Indeed, attention and interest are really two aspects of the same thing.

Of course it is true that sometimes interest is initiated by attention. It must be true, of course, if we mean by attention mere sense perception. We must see a thing,

[1] Ribot, "The Psychology of Attention," Humboldt Edition, p. 13.

touch it, taste it, smell it, hear it or about it, before there is any basis for interest. Our eye may happen, for instance, to fall upon an object, accidentally. We examine it and it may become interesting. All this is perfectly true, but the inference that some have drawn from it, namely, that attention and not interest is the fundamental thing, is incorrect. Voluntary attention, it has often been shown and may easily be demonstrated, is practically an instantaneous affair. Even if it be obtained by command or bestowed by conscious effort, it will remain only for a moment. Unless the matter to which attention is drawn is interesting, either for its own sake or because of its association as means with some desirable and therefore interesting end, it will wander away from it. The secret of holding attention, then, is to awaken interest. "Do not, then, for the mere sake of discipline command attention from your pupils in thundering tones. Do not too often beg it as a favor or claim it as a right, or try habitually to excite it by preaching the importance of the subject. Sometimes, indeed, you must do these things; but the more you have to do them, the less skillful a teacher you will show yourself to be."[1] So says Professor James, and he follows this injunction by the statement that to secure attention we must "elicit interest from within." Plainly, then, the problem of attention is a problem of interest.

So much for the problem of attention. Let us now

[1] "Talks on Psychology and Life's Ideals," New York, 1901, p. 111.

consider the nature of retention and the problem of cultivating the memory, and see what relation they sustain to the feeling of interest.

3. Interest and Memory. — The retentiveness of the mind depends, to a considerable extent, no doubt, upon the character of the brain structure. It is in some degree a gift of nature. But with given natural retentive ability memory depends, first, upon depth of impression, and second, upon the force of association. Now, it is obvious that the depth and consequent permanence of an impression are determined by the attitude of the mind in relation to it. Retention depends upon attention. "The permanence of an impression," says Sully, "depends upon the degree of interest excited by the object, and the corresponding vigor of the act of attention. All strong feelings give a special persistence to impressions by arousing an exceptional degree of interest. Where a boy is deeply affected by pleasurable feeling, as in listening to an attractive story or in watching a cricket match, he remembers distinctly. Such intensity of feeling, by securing a strong interest and close attention, insures a vivid impression and a clear discrimination of the object, both in its several parts or details, and as a whole. And the fineness of the discriminative process is one of the most important determining conditions of retention." [1]

[1] "Teachers' Handbook of Psychology," New York, 1887, p. 134–135.

According to Professor William James, whom we have just quoted, "there can be no improvement of the general or elementary faculty of memory, there can only be improvement of our memory for special systems of associated things." This may not be, probably is not, strictly true. But generally speaking the only improvement of the memory possible to the school is the improvement that results from establishing in the mind a system of associated ideas, any one of which may call up others. These ideas must be "woven into association with each other in the mind." The more intricately and profoundly they are interwoven, the more certainly will they be retained. Now, who is to do this interweaving? Who is to build up these associations in the mind? Who, indeed, can do so but the person whose memory is to be improved? He may receive encouragement; others may stimulate him to make the effort, but it must be made by him if the associations are to be established in his mind. He must think over the facts that he wishes to remember and weave them into the most systematic relations with each other. But for making all this effort, for doing all this thinking, there must be some possible inducement, some motive. There must be some perception of their use or sense of their value. And what is this perception of use and sense of value but interest? It is, of course, interest and nothing else.

And so we come to this: We remember those things

that are interesting, the things that we care for, or those that are associated with such things. We take the trouble to build up in our minds the system of associated ideas necessary to the remembrance of a special class of facts only when interest incites us to do so. New facts to be remembered must be woven into the system by the active process of thought. This will not be done without interest. Memorizing, then, is thinking. Thinking is the secret of memory, but interest is the secret of thinking.

That the cultivation of the memory depends upon interest is a fact that will be found to be illustrated in the case of such persons as possess a remarkable memory for any particular class of facts. We have some notable examples in history. It is said, — with how much truth it were idle to inquire, — that Cyrus, the founder of the Persian empire, knew the name of every soldier in his army; that Mithridates, king of Pontus, knew all of his eighty thousand soldiers by their right names, and, that he might do so, became more or less proficient in the languages of the various countries whose troops served under his banners; that Themistocles could call by name every citizen of Athens, twenty thousand in number; that Scipio knew all the inhabitants of Rome. All these men, you observe, are reputed to have had a remarkable memory for names. It will be observed, also, that they were military leaders and politicians, men to whom the remem-

brance of names was of peculiar value. It is easy to see how a memory of this kind is of value to a general, and every one is aware that the success of a politician is more or less dependent upon it. In all such cases the peculiarity and strength of the memory is indicative of an absorbing life interest. A memory for names is cultivated by men whose interest impels them to do so; their success is dependent upon it.

There are cases of remarkable memories of the same kind not so far removed in time but that we may know the secret of their development. Thurlow Weed, for instance, the celebrated New York journalist and politician, a man who possessed a remarkable memory not only for names and faces, but also for political matters generally, confesses in his autobiography that at the beginning of his career his memory was poor. He concluded that its improvement was necessary to his success. So he set to work consciously and deliberately to improve his memory. He adopted the method of recalling at night, as clearly as possible, all that had happened during the day. That he might apply his recollections to immediate use, and have an immediate purpose, he repeated to his wife the history of the day. This practice he kept up for more than fifty years. That interest in his own success was the motive which induced him to cultivate his memory would be obvious, even if it were not confessed.

One more example of the same kind. A certain col-

lege president is said to be able to recognize and call by name all the students who have attended the institution over which he presides. This is probably not true, but he remembers so many of them that he has acquired a reputation for remembering them all. This president says that when he took charge of the institution he had a remarkably poor memory for names. He realized, however, that this would be an obstacle to his success. Consequently he undertook consciously to strengthen his memory in this respect. He devised certain methods and followed them persistently. At length, after a long and persistent attention to the matter, he acquired a strong memory for names. Here the relation of interest and memory is quite as obvious as in the preceding case. This president was interested in the success of his institution. He saw the importance of a memory for names as a means to this success. Consequently he set about its development. His peculiar memory is a result of a peculiar interest.

Mozart is said to have had a wonderful memory for musical sounds. It is reported that "when only fourteen years of age, he went to Rome to assist in the solemnities of Holy Week. Immediately after his arrival, he went to the Sistine Chapel to hear the famous 'Miserere' of Allegri. Being aware that it was forbidden to give or take a copy of this renowned piece of music, Mozart placed himself in a corner, and gave the strictest attention to the music, and, on leaving the

church, noted down the entire piece. A few days afterwards he heard it a second time, and following the music with his own copy in his hand, satisfied himself as to the fidelity of his memory. The next day he sang the 'Miserere' at a concert, accompanying himself on the harpsichord; and the performance produced such a sensation in Rome that Pope Clement XIV requested that the musical prodigy should be presented to him at once." So runs the story. In this case it is probably true that there was a strong elementary faculty of memory. But it was certainly accompanied and fortified by a powerful musical interest.

These, and other illustrations which might be given, support the conclusion reached in considering the nature of an acquired memory, that retention as well as attention is the result of interest, and that the problem of cultivating the memory is essentially a problem of interest. A conclusion exactly similar will be reached if we take any other educational problem and consider it in the same way. As the matter is of fundamental importance, we shall consider a few other problems. Let us pass to the problem of training children to think.

4. **Interest and Thought.** — The only possible method of training children to think is to lead them to exercise their minds in the process of thinking. Such exercise, which requires comparison and judgment, an active state of the mind, the expenditure of mental energy,

will not be undertaken without a motive. And what motive can there be but the consciousness that either the process of thinking or the conclusions reached bear a significant relation to the satisfaction or well-being of the self? This consciousness, however, is interest. So we arrive again at the same conclusion with regard to the relation which interest sustains to the cultivation of the power to think that was reached with respect to the problems previously mentioned. The problem of interest underlies the problem of cultivating the intellectual power. Let us now see its relation to the problem of moral training, that is, the cultivation of the will.

5. **Interest and the Will.** — What we call the will implies the act of choosing between different modes of action, and upon this power of choice character primarily depends. The education of the will, then, since it has in one of its aspects a moral significance, is one of the most important functions of the school. How is it to be accomplished?

Without entering upon a technical discussion with respect to the nature of the will, let us take a typical example of willing, and see, if we can, what is involved in the process. Suppose, for instance, there is a question as to how you will spend the day. Obviously there must be open to you more than one possible way of spending it, otherwise there would be no opportunity for choice. You may spend the time in study, you may visit a friend, you may work in the garden, you may go

to the woods. There are various things you may do. All these things, and more, present themselves to your consciousness in rapid succession, and it is your business to choose the one you prefer from among them. The choice, however, involves selection, and selection will not be made until the one or the other appears to you to be preferable. There must, therefore, be inhibition of the tendency to act in accordance with any idea that presents itself, until the comparison is made and a judgment is formed. When you have weighed the probable results of spending the day in this way or that, you at last reach a decision. You decide that one way is preferable to all the others. Your mind is made up, and you act accordingly.

Now the most careful examination of this process of willing will reveal absolutely nothing but states of consciousness — attention and the deliberate reflection and judgment involved in thought. That is to say, the problem of the cultivation of the will presents no new mysterious or extraneous factor. It is all summed up in the one word Thinking. Professor James says, "If, then, you are asked, 'In what does a moral act consist when reduced to its simplest and most elementary form?' you can make only one reply. You can say that it consists in the effort of attention by which we hold fast to an idea which but for that effort of attention would be driven out of the mind by the other psychological tendencies that are there. To think, in short, is the secret

of will, just as it is the secret of memory." But we have already seen that back of thought lies interest, so we must conclude that the problem of cultivating the will, like those previously considered, is fundamentally and essentially a problem of interest.

6. Interest and Discipline. — As a final illustration of the fundamental importance of interest, we shall consider the relation that it sustains to the problem of discipline. Discipline presents a problem, which, especially to the young teacher, is perhaps the most important of all. Unless the teacher can "discipline" the school, he will soon be in the condition of Othello, — his occupation will be gone. By some of the earlier school authorities it was supposed that a good disciplinarian must necessarily be a man or woman of great physical power. Even now, the successful control of a school by "a slip of a girl," especially if the school contains a few husky and mischievous boys, is spoken of in some localities as a thing to cause wonder. But we have long since learned that this problem, as well as the other problems of education, yields much more readily to intelligence than it does to brute force. Even with this view of the matter, however, discipline is to many teachers the most troublesome problem they have to encounter.

Now, what is the best method of discipline? It is the indirect method. The teacher may lecture, enjoin, entreat, command, and all he does may be of no avail. Unless the interest of the children be aroused in the work

of the school, there can be only the compulsion and discipline of a penal institution. But if the teacher can succeed in arousing the interest of the children in the subjects of instruction, and in the harmony of action necessary to a well conducted school, discipline will practically take care of itself.

In almost every school, at least in a great many, there is "a bad boy"; and so we have a bad boy problem, which is, of course, only a special problem in discipline. Now, who is the bad boy? Generally speaking, he is the boy who is not sufficiently interested in either his lessons or in the welfare of the school to care for the one or the other. Often he is "a good boy whose energies are misdirected." He is not in any case without interest, however, only his interest does not attach itself to the objects and ends desired by the teacher. If the teacher can succeed in arousing his interest in the school activities, he often becomes the best pupil. The bad boy is simply the boy whose interests conflict with the requirements of the school. We have a term used to designate the bad man of society. It is the word "anti-social." The bad man is simply the man whose psychological interests do not harmonize with the interests of society. The problem of the bad boy, as well as that of the bad man, is merely a problem of harmonizing interests.

To show how the problem of discipline may be solved by attention to interest, a case may be cited which has

come under the writer's notice. A certain boy had been dismissed from school two years in succession. He was not a particularly bad boy; he was a nonconformist with respect to school regulations. A new teacher was employed. The boy came to school, selected a seat in the center of the room, and by inattention, inapplication, and general disregard of the rules began to make trouble for the teacher. The other pupils awaited the outcome expectantly. Well-meaning patrons of the school advised the teacher to expel the boy at once. The teacher accepted the situation, however, as a challenge to his tact and skill. He studied the boy's interests, and found that he had some pride in his ability to make things with a knife. The teacher then asked him if he thought that he could make some simple apparatus for the class in physics. He thought that he could. But while he was at work upon his task, he created a great deal of confusion in the school by talking, moving about, and in various ways interfering with the work of others. How easy it would have been to evoke trouble just at this point by an attempt on the part of the teacher to impose his will on the boy! Instead of doing so, he complimented him on his success, and incidentally asked him if he could do his best work in the midst of the other pupils. He thought that he could not, for, as he said, "they disturbed him." The teacher then asked him if he would not like a room to himself. He thought that would be a fine thing. In a few days he was at

work in an anteroom, shut off from the other pupils and incapable of disturbing them, and quite proud of the fact that he had been accorded a particular distinction.

To make the apparatus required, the boy was obliged to study the book and the lessons assigned. When the class came to the subject of electricity, he manifested a deep interest. He made a Holtz electrical machine that served all the purposes of the class. He came to see the relation between physics and mathematics, and by the end of the year he led his class in both subjects.

This boy completed the work of the high school without giving the teacher any serious trouble in the matter of discipline. And long before the work was completed he was looking about for a college or university that offered special opportunities in the line of physics, to which he might go for further instruction. He was advised to enter one of our largest universities. He did so, and secured employment to defray his expenses. While he was pursuing his course, a professor of that university was asked whether he knew the boy. "Know him!" said he, "everybody knows him, he is a genius!" This "special case" is now a professor in his Alma Mater, a man of usefulness and power.

Now, the bad boy is not always a genius, but the successful solution of the problem of discipline in this particular case is an indication that, with skill and sufficient

diplomacy, the native and acquired interests of even the so-called incorrigible pupil may be expanded, intensified, and turned to social account. At any rate, the problem of discipline is practically solved when a solution is found for the problem of interest.

By continuing the process of inductive reasoning followed in this chapter it could be shown, I think, that what is true of the educational problems of attention, memory, thought, the will, and discipline, is true of them all. They are all, at bottom, problems of interest. "The fact," says Ostermann, "that the whole range of the associative process, as well as attention and retentiveness of the memory, and indeed, all spontaneous and happy devotion to school work, is dependent upon interest, makes it evident that interest is of special significance for the intellectual results of school instruction. At the same time, the fact that all the motives of conscious effort and volition depend on interest causes interest to assume, from an educational standpoint, the significance of a cardinal concept of pedagogy, of a fundamental principle on whose proper recognition depends more than upon anything else the educational success of home training." [1]

This, I believe, is true. At all events, I shall proceed upon the theory that the problem of interest underlies all other educational problems; that education consists,

[1] Ostermann, "Interest in its Relation to Pedagogy," p. 82, quoted by McMurry, "Elements of General Method," New York, 1903, pp. 154-155.

or should consist, not in the imposition of more or less monotonous or meaningless tasks, but in the skillful guidance of activities arising from interest. We may naturally turn, therefore, to a consideration of the Doctrine of Interest.

CHAPTER VI

THE DOCTRINE OF INTEREST

No profit grows where is no pleasure ta'en.
In brief, sir, study what you most affect.
— SHAKESPEARE.

In choosing the succession of subjects and the modes of instruction which most interest the pupil, we are fulfilling nature's behests, and adjusting our proceedings to the laws of life. — SPENCER.

1. **The Doctrine Stated.** — The doctrine of interest, briefly stated, is that the work of the school should be interesting. That it may be so, the selected subject matter of instruction must be related to the child's experience, powers, and needs, and must be so presented as to awaken in him a sense of its personal significance. Herbart expressed the doctrine in this form: "The interest naturally attaching to the ends for which pupils study should be awakened in the means, that is the studies, used for reaching them." This doctrine assumes the correctness of what was stated in the preceding chapter with respect to the underlying relationship of interest to attention, memory, thought, will, and action, and declares that school studies and school tasks, if carefully adapted to the needs of the child, will be attractive to him, will be undertaken with pleasure, and that pleasurable activity is most beneficial in its results, with respect

both to discipline and to the acquisition of knowledge. The art of education, then, according to the doctrine of interest, consists in utilizing the native impulses or natural aptitudes of the child to develop in him the powers, habits, and knowledge essential to individual and social well-being; that is to say, the control of interest. "This utilizing of interest and habit," says Dewey, "to make of it something fuller, wider, something more refined and under better control, might be defined as the teacher's whole duty."[1]

2. **Interest and Play.** — The doctrine of interest is sometimes incorrectly represented as meaning that all the work of the school should be made easy, that it should become the same thing as play, that children should not be required to devote attention to anything that involves conscious effort. This, however, is a mistaken conception of the doctrine. It does not imply that the spontaneous interests should be humored, but that they be controlled and directed. Children should not be allowed to do as they please, but they should be led, if possible, to do with pleasure whatever it is necessary for them to do. That is, their interest should be aroused in the case of all necessary tasks.

If the teacher sets the tasks with due regard for the necessities of the child's development, some of these tasks will of course be difficult. But children, as a rule,

[1] "Interest as Related to Will" (second supplement to the Herbart Yearbook for 1895), p. 31.

are not deterred by difficulties. They like to undertake what is difficult, provided, of course, it is not too difficult, and provided also that it is something which it seems worth while to perform, something which, as they say, has "some sense" in it. No one needs to be told that there is a pleasure in the achievement of difficult things, in the mere exertion of power. Sometimes the mere difficulty excites interest.

A difficult task, then, is not necessarily uninteresting. It must be acknowledged, of course, that much of the work of the school demands voluntary attention. Left to the free play of his native interests, the child would not undertake it. But it must be done. Now, let us suppose a difficult and uninteresting, but necessary, task. How is the child to be led to perform it? What would be the procedure in accordance with the doctrine of interest?

Well, in the first place, the interest of the child may possibly be drawn to the task by additional knowledge concerning it. The teacher provides that, and thus, by flashing the light of his own intelligence upon it, reveals its different aspects, and endeavors to make it attractive of itself, so that direct interest in it may be awakened. If unsuccessful in this, he tries to show the relation of the task and its successful performance to something the child does desire, and thus brings it within the glow of an existing interest from which it may borrow light and heat, and thus awaken an indirect interest.

The teacher knows that if sufficient interest be aroused, direct or indirect, the task will be performed, for interest impels to action.

Now, let us observe the probable procedure of a teacher who would disregard the doctrine of interest. In all probability such a teacher would begin by an attempt to appeal to the child's interest. But if no interest is manifested, that is, if he fails with this method, such a teacher then resorts to a form of compulsion. If he says, "You must do this, or be kept in after school," he relies on a negative interest in the threatened punishment to induce a sufficient indirect interest to carry the child over the difficulty. Or if he moralizes, and lectures the child on the disciplinary value of overcoming difficulties, he is but trying to arouse the interest of the child in a desirable quality to the creation of which the difficult task is expected to contribute, and is thus applying the doctrine of interest as it is involved in the awakening of indirect interest. The fact is, the doctrine of interest cannot be really evaded. It crops up in every method of influencing the mind. It may be unskillfully applied, but you can no more disregard it than you can disregard nature.

This being the case, it is better to acknowledge frankly the part that interest plays in all voluntary action and proceed to the acquirement of skill in calling it forth. We need have no fear that all the work of the school will become play. Some of it will be dry and uninter-

esting enough after we have done our best to throw about it an attractive halo that will incite attention and awaken interest. But the more of it that can be brought within the range of interest, so that the child will undertake it with a zest and an enthusiasm akin to what is manifested in play, the more rapidly he will develop. Joy in work is the aim in life, and it should be the aim of the school.

Play is only nature's method of bringing about development. As I write, a kitten is playing on the floor. It runs, jumps, grasps, rolls over, and otherwise exerts itself so as to bring into play practically all of its muscles. What it is doing requires difficult coördinations and adaptations of its various organs. But the kitten is wholly unconscious, of course, of the ends which its play subserves. So far as it is concerned, the play ends in feeling. But nature has carefully brought it about through a long process of evolution that its feeling coincides with function. Without intending it, the kitten is developing its powers quite as effectively as if its play were undertaken solely for that end. Play is a device of nature ; work is a device of man.

Inasmuch, however, as the play impulse is so strong in the child, and in the race, it is obvious that a skillful application of the doctrine of interest must involve constant appeal to it through purposeful organization of play activities. The game is a powerful instrument in the hands of a skillful teacher. Furthermore, since with

the little child play is almost the whole of life, "the greatest thing in the world," it ought to be obvious that the activities required in elementary education should take the form of play. We need have no fear that, in skillful hands, too much of the work of the school will be made play. We should be more concerned with the fact that the possibilities of a wise direction of the play impulse seem as yet to be but faintly perceived.

3. Interest and Effort. — A second objection to the doctrine of interest, or rather another form of the first objection, is that it disregards effort, or the cultivation of the will. This objection implies that the will is a separate faculty of the mind and may be cultivated independently of thought and attention. This, to say the least, is questionable psychology. It implies, furthermore, that the best way to cultivate the will is to exercise it upon what is wholly uninteresting and disagreeable. As a matter of fact, this cannot be done. There must be some motive for action. If any one is led to undertake a difficult thing merely for the purpose of cultivating his will, obviously it is the reflected interest of the desired end, namely, will power, that impels him to action. It is somewhat surprising to find even Professor James using language that implies the possibility of cultivating the will, so to speak, *in vacuo*. He says, "Keep the faculty of effort alive in you by a little gratuitous exercise every day." But there is no such thing as gratuitous exercise. Certainly exercise to keep alive

the faculty of effort could not be classed under that head. In the same connection, he urges us to do something every day or two "for no other reason than that you would rather not do it," and then proceeds to give us another reason, namely, "that when the hour of dire need draws nigh, it may find you not unnerved and untrained to stand the test."[1] The advice is good, but the psychology implied is certainly at fault. What Professor James really means is this, that the power of concentrating attention, of energetic volition, and of self-denial is of so much importance in life that every one should become so much interested in acquiring it that he will give frequent conscious attention to its development by practicing this virtue upon otherwise unnecessary things.

Teachers sometimes say that in order to develop the will, children must be made to do what they do not want to do. Of course, that, in any strict sense of the word, cannot be done except by physical compulsion. Whatever the will may be, it never acts without a motive, and it never operates without regard to the effect of the action upon the willing agent. A child that is driven to a task takes it up through fear of punishment. He prefers the disagreeable feeling arising from the application to the work required, to the still more disagreeable feeling that will arise from the punishment to be inflicted. Of two evils he chooses the lesser. Those who resort

[1] James, "Psychology, Briefer Course," New York, 1892, p. 149.

to this method of stimulating the activity of the child deceive themselves when they say that they have "made the child do what he did not want to do." They have merely stacked the resultant effects so that the child prefers to perform the task required rather than to take the consequences. They have done little or nothing to cultivate the will. What they have really effected is this: they have developed in his mind a negative interest in a situation which the child can avoid only by applying himself to the work required. This negative interest, if sufficiently intense, gives to the means necessary to avoid the punishment, that is, the work required, an interest merely sufficient to move the will. But such interest, being associated with a disagreeable or painful situation, is not likely to become a permanent interest, and thus one of the chief ends of education is defeated.

The same self-deception and faulty psychology are involved in the prevailing popular conception of the necessity of "breaking the will." The idea that to mend a child's will it must be broken seems natural enough if the words alone be considered. But that such a method of moral training has been countenanced in the home and in the school shows with what little reflection a responsible task is sometimes undertaken. It would be quite as absurd to advocate the breaking of a child's bones as the first step to the development of his body as to insist on breaking the will as the necessary preliminary to the development of his character. Instead

of trying to break the will we should curb and direct it.

There is another undesirable consequence of this method of training the will. It is that of divided attention. Dr. Dewey brings this out in his essay on "Interest as Related to Will." "The great fallacy of the so-called effort theory," he says, "is, that it identifies the exercise and training of will with certain external activities and certain external results. It is supposed, because a child is occupied with some outward result, and because he succeeds in exhibiting the required product, that he is really putting forth will, and that definite intellectual and moral habits are in process of formation. But as a matter of fact, the moral exercise of the will is not found in the external assumption of any posture, and the formation of moral habit cannot be identified with the ability to show up results at the demand of another. The exercise of the will is manifest in the direction of attention, and depends upon the spirit, the motive, the disposition, in which the work is carried on.

"The child may be externally entirely occupied with mastering the multiplication table, and may be able to reproduce that table when asked to do so by his teacher. The teacher may congratulate himself that the child has been exercising his will power so as to be forming right intellectual and moral habits. Not so, unless moral habit be identified with this ability to show certain results when required. The question of moral training has

not been touched until we know what the child has been internally occupied with, what the preponderating direction of his attention, his feelings, his disposition, has been while engaged upon this task. If the task has appealed to him merely as a task, it is as certain, psychologically, as the law of action and reaction physically, that the child is simply engaged in acquiring the habit of divided attention; that he is getting the ability to direct eye and ear, lips and mouth, to what is present before him in such a way as to impress those things upon his memory, while at the same time getting his mental imagery free to work upon matters of real interest to him.

"No account of the actual moral training secured is adequate unless it recognizes the division of attention into which the child is being educated, and faces the question of what the moral worth of such a division may be. External mechanical attention to a task conceived as a task is the inevitable correlate of an internal mind-wandering along the lines of the pleasurable.

"The spontaneous power of the child, his demand for realization of his own impulses, cannot by any possibility be suppressed. If the external conditions are such that the child cannot put his spontaneous activity into the work to be done, if he finds that he cannot express himself in that, he learns in a most miraculous way the exact amount of attention that has to be given to this external material to satisfy the requirements of the teacher, while saving up the rest of his mental powers

for following out lines of imagery that appeal to him. I do not say that there is absolutely no moral training involved in forming these habits of external attention, but I do say that there is a question of moral import involved in the formation of the habits of internal inattention." [1]

What a child is made to do, then, is of less consequence in training the will, and in developing the power of attention, than what he is led to undertake with the zest due to a lively interest. The training of the will is nothing more than the training of the intellectual powers by means of which we evaluate the different ends of action. To think rightly, and to cultivate the habit of responding to our own judgment of what is best, is the only method of training the will.

We must dismiss the idea, then, that there is any special disciplinary value in disagreeable tasks or in drudgery. "Observation shows, as a fact," says Claparède, "that the value and fertility of work are in direct proportion to its intrinsic interest. By substituting for this intrinsic interest an extrinsic interest (like that of avoiding punishment) one cuts off the spontaneous assistance of the mind; for, not having created in mind any desire for knowledge that the accomplishment of work might satisfy, one has not set in motion any of the mental processes specially adapted for securing its

[1] Quoted also by McMurry, "Elements of General Method," New York, 1903, pp. 155–157.

accomplishment. This inferior form of work is what is called drudgery. Drudgery, since it does not respond to any need in our nature, repels us, as a meal repels us when we are not hungry; also it sets in motion a crowd of defensive reflexes (disgust, inattention, etc.), which, to begin with, have to be kept in check, and this entails expenditure of energy without any effective work to show for it. Drudgery is therefore particularly exhausting and discouraging, since for a minimum of work it exacts a maximum of energy."[1]

Why, then, should we not strive to make the school a most interesting place to the children? Let us frankly admit that if the school is not attractive to the child something is wrong with the school. Shakespeare's simile in the lines —

> "Love goes toward love, as schoolboys from their books;
> But love from love, toward school with heavy looks"

should be made inapplicable by the recognition and discovery on the part of the teacher of the natural sequence in which the faculties spontaneously develop, and by the careful provision of the kind of knowledge that each requires; that is, by a skillful application of the doctrine of interest. The gospel of education is the gospel of art, joy in labor. It has been well described by Kenyon Cox in the lines that follow: —

> "Work thou for pleasure; paint or sing or carve
> The thing thou lovest, though the body starve.

[1] Claparède, "Experimental Pedagogy," New York, 1912, p. 156.

"Who works for glory misses oft the goal;
Who works for money coins his very soul.

"Work for the work's sake, then, and it may be
That these things shall be added unto thee."

4. **Interest and Duty.** — A third objection to the doctrine of interest is that it makes pleasure, satisfaction, ease, comfort, well-being, or some desirable personal condition the end of action rather than Duty. (Exactly the same criticism might be offered against Nature.) Duty, it is said, is "the stern daughter of the voice of God," and her behests must be obeyed. So they must. But duty is not an end in itself. Why should any one perform his duty unless it be because he will be better off for having performed it? The performance of duty leads to an improved state of being. How is this improvement to be measured except in terms of some kind of satisfaction? The doctrine of duty, then, merely means that we should attach such an interest to the end for which duty is performed that we obey the behests of duty for the sake of the end. This doctrine presents merely a case of secondary or mediate interest. A disagreeable duty is merely a task which possesses no immediate interest of itself, but which bears such an intimate relationship to the attainment of character that it borrows from it a sort of reflected interest; just as does the study of arithmetic to the boy who has no fondness for it, when it becomes necessary to enable him to pass an examination. Duty is merely a means to right living. Awaken suf-

ficient interest in the end, and duty becomes interesting and will be performed. There is absolutely no conflict between the doctrine of interest and the doctrine of duty when the former is properly understood.

5. **All Necessary Work may be made Interesting.** — While the work of the school may not become play, interest may be attached to it if there is sufficient knowledge and skill on the part of the teacher to give it a personal meaning and consequence, that is, to connect it closely with the life of the child. There is absolutely no necessary task, no form of drudgery in school or in life, that may not, under conceivable circumstances, become interesting, or that may not be made interesting by ideal knowledge and skill.

I am aware that Professor James may be quoted as saying that "in all schoolroom work there is a large mass of material that must be dull and unexciting, and to which it is impossible, in any continuous way, to contribute an interest associatively derived"; that "it is certain that most schoolroom work, until it has become habitual and automatic, is repulsive, and cannot be done without voluntarily jerking back the attention to it every now and then"; that "this is inevitable, let the teacher do what he will"; and, finally, that "it is nonsense to suppose that every step in education *can* be interesting." With such positive statements of so great an authority confronting me, I should hesitate to assert the contrary were Professor James consistent. But he is not. He

says, also, "The most natively interesting object of a man is his own personal self and its fortunes. We accordingly see that the moment a thing becomes connected with the fortunes of the self, it forthwith becomes an interesting thing." To say, then, that there are steps in education that cannot be made interesting is equivalent to saying that such steps in education are in no possible way connected with the fortunes of the self! That would be strange doctrine. If there be such steps, is it not obvious that they should be at once removed?[1]

To see how even drudgery may rise to the plane of interest, consider the work that a mother performs for the sake of her child. To the onlooker it seems uninteresting and disagreeable, the worst form of drudgery. To the mother herself, however, it presents an entirely different aspect. Her interest is in the child. The child is, in a very true sense, a part of herself. She cannot be indifferent to its wants and its welfare. Whatever is necessary to the well-being and happiness of the child is therefore essential to her own well-being and happiness. The work that she performs, then, being necessary for the child's comfort, becomes interesting to her because it means so much to her own life. It acquires a secondary interest. If a teacher were as deeply interested in the children of the school

[1] In this connection it may be pointed out that Professor James's criticism of what he calls "soft pedagogics" is not directed against the doctrine of interest, but against its unintelligent application. See *op. cit.*, pp. 54, 95, 109, 111.

as a mother is in those of her own household, the teacher's work, even to the grading of papers and other routine duties, would become interesting. The end would dignify and glorify the means.

In society the work that we call menial seems disagreeable enough. It is a form of drudgery. The workman applies himself to it with little or no immediate interest. He goes to his work with no more eagerness than Shakespeare's boy "creeping like snail unwillingly to school." But if the workman were animated, not merely by an interest in the wages he is to receive, but also by a clear recognition of the relation of his work to human needs, and by a deep desire to serve humanity, the work itself would take on an interest borrowed from interest in the end which the work subserves.

"No kind of useful labor," says John Stuart Mill, "is necessarily or universally repugnant, unless either excessive in amount or devoid of the stimulus of companionship and emulation, or regarded by mankind with contempt." In Shakespeare's "Tempest," Ferdinand who is carrying logs in obedience to Prospero, is made to say: —

> "This my mean task
> Would be as heavy to me as odious, but
> The mistress which I serve quickens what's dead
> And makes my labours pleasures."

When Miranda implores him not to work so hard and to let her assist him, he says: —

"No, noble mistress ; 'tis fresh morning with me
When you are by at night . . .
and for your sake
Am I this patient log-man."

Is there anything in school or in life that love cannot make interesting?

If, then, we fail to make the school, or any part of its work, attractive to the children, we may not excuse ourselves on the ground that most schoolroom work is necessarily repulsive. We shall frankly admit that we are lacking in skill. Without such admission there is not likely to be serious effort at improvement.

6. **Conclusion.** — We have now seen that the Doctrine of Interest applies to all the activities of the school, that it is not inconsistent with the doctrine of duty, that it should not be disregarded in the effort to develop moral character, that it is far from meaning that children should be permitted to do as they please or to follow every whim, and that it is anything but "soft pedagogics." Activity in accordance with interest is a law of mind, a law as much to be relied upon as any other law of nature. To violate it in the effort to educate means always a waste of time, even if it results in no more serious evil consequences. The wise teacher will therefore study to understand the Doctrine of Interest, not be misled by criticisms based upon misconceptions of the doctrine, and will seek diligently the knowledge that will enable him to apply it successfully.

CHAPTER VII

METHODS OF AROUSING INTEREST

The art of teaching is nothing but the art of awakening curiosity in young souls in order to satisfy it afterwards.— ANATOLE FRANCE.

Teachers are fond of talking about creating an interest, but this labor at least is spared them. They have not to create, but only to direct interest. — ADAMS.

1. **The Problem of the Teacher.** — If the doctrine of interest is sound, the chief problem of the teacher is the problem of awakening interest in objects which are not of themselves natively attractive; that is, the problem of arousing indirect interest. Properly directed self-activity is, of course, the end the teacher must aim to reach, but this is to be attained only indirectly. If the teacher is able to arouse the appropriate interest, self-activity will take care of itself. To arouse such interest it is necessary to know that interest is the impelling power, and to have some acquaintance with the methods by which it is controlled; just as it is necessary for an engineer to know the kind of force that runs his engine and the peculiar method of its control.

Suppose that a man who has no knowledge of machinery should be placed in charge of an industrial plant containing various kinds of machines. He would know that somehow the machinery must be set in motion. We

can imagine him pulling away at a belt or pistonrod, or applying his strength in a vain effort to turn the wheels. He would wear himself out, and nothing would be accomplished. How different would be the procedure of a skillful mechanic! He would ascertain the kind of force to be applied, — water power, steam, or electricity, — and then, after examining the various machines to see that they were properly adjusted, he would open a valve, pull a throttle, or press a button, and a force other than his own would set the entire machinery in harmonious motion.

Now, the school is more complex than an industrial plant. Children are far less easily controlled than machinery. They do not await the effort of the teacher to set them in motion. But harmonious activity is not easily secured. The unskillful teacher, like the ignorant mechanic, proceeds with little regard to the motive power. He demands, scolds, threatens, storms, punishes; proceeds, as the saying is, "by main strength and awkwardness." The result is exhaustion and confusion. The skillful teacher, however, like the skillful mechanic, proceeds quietly and with confidence. He knows the motive power, and how to touch the spring of action. He awakens appropriate interest, and the activities of the school are carried on without unnecessary friction, and toward desired ends.

But how is the teacher to succeed in arousing interest? That is the problem to which we must now turn our attention.

2. Life as Interest and a Succession of Interests.— Fortunately for the teacher, arousing interest does not mean the creation of interest *de novo*. As has been said before, the problem is not the creation of interest, but its control and direction. And this leads us to the preliminary consideration of two important facts which have a peculiar significance for education.

The first of these facts has already been referred to. It is this: The child, even the youngest, is provided with a variety of instincts that manifest themselves in an equal variety of interests. Fear, anger, affection, imitation, rivalry, sympathy, sociability, vanity, envy, jealousy, are among the instincts with which the child is equipped. The things that satisfy these instincts are natively interesting. Here, then, we have the points of initiative, something to appeal to, the "working machinery" of the child's life. Life is interest.

And the second fact may be expressed as follows: Life consists in a successive change of interests. This is a fact that perhaps needs little or no illustration. It has been observed and set forth not merely by the psychologists, but by poets as well. Pope, for instance, in his "Essay on Man" presents a picture of life which well illustrates this successive change. He says: —

> "Behold the child, by nature's kindly law,
> Pleas'd with a rattle, tickled with a straw:
> Some livelier play-thing gives his youth delight,
> A little louder, but as empty quite:
> Scarfs, garters, gold, amuse his riper stage,

And beads and pray'r-books are the toys of age:
Pleas'd with this bauble still, as that before;
'Till tir'd he sleeps, and Life's poor play is o'er."

This is a somewhat pessimistic view of life, but it is correct so far as the successive change of interests is concerned. One has only to reflect upon the changes that have taken place in one's own life to realize that this is true. We smile when we think of the objects of our interest in earlier periods of our lives. Sports and games that used to be absorbingly interesting have lost their attractiveness. Early ambitions have passed away. The man who in youth aspired to become a circus performer, a prize fighter, an Indian slayer, or a detective, finds himself entirely bereft of these youthful ambitions. He is interested in other things. Wordsworth in the "Ode on Immortality" gives such a true picture of life with respect to changing interests that it is worth reproducing for its own sake although it may not be needed to enforce what has just been said. He says: —

"Behold the Child among his new-born blisses,
A six years' Darling of a pigmy size!
See, where 'mid work of his own hand he lies,
Fretted by sallies of his mother's kisses,
With light upon him from his father's eyes!
See, at his feet, some little plan or chart,
Some fragment from his dream of human life,
Shaped by himself with newly-learned art!
A wedding or a festival,
A mourning or a funeral,
And this hath now his heart,

And unto this he frames his song:
Then will he fit his tongue
To dialogues of business, love, or strife;
But it will not be long
Ere this be thrown aside,
And with new joy and pride
The little Actor cons another part;
Filling from time to time his 'humorous stage'
With all the Persons, down to palsied Age,
That Life brings with her in her equipage,
As if his whole vocation
Were endless imitation."

Life, then, is a successive change of interest. It is the function of the school to make this change progressive.

3. **Begin with Native Interests.** — In order to direct the current of interest and insure progressive rather than regressive change we *must* begin with native interests; that is, we must devote attention primarily to objects that are in themselves attractive or repellent to the child. This necessarily involves a study of children's interests. The teacher must know when certain interests manifest themselves, and in what order. "In children we observe," says Professor James, "a ripening of impulses and interests in a certain determinate order. Creeping, walking, climbing, imitating vocal sounds, constructing, drawing, calculating, possess the child in succession; and in some children the possession, while it lasts, may be of a semi-frantic and exclusive sort. Later, the interest in any one of these things may wholly fade

away. Of course, the proper pedagogic moment to work skill in, and to clench the useful habit, is when the native impulse is most acutely present. Crowd on the athletic opportunities, the mental arithmetic, the verse-learning, the drawing, the botany, or what not, the moment you have reason to think the hour is ripe. The hour may not last long, and while it continues you may safely let all the child's other occupations take a second place. In this way you economize time and deepen skill; for many an infant prodigy, artistic or mathematical, has a flowering epoch of but a few months." [1]

The interests of children at different periods of development have been carefully investigated by Barnes, Binet, Preyer, Shaw, and others. Miss Tanner, in her book on "The Child," specifies these interests at each of the following stages: (1) Babyhood up to the acquirement of speech; (2) early childhood, up to the second dentition; (3) later childhood, to the advent of puberty; and (4) adolescence, to the completion of the bodily growth.[2]

At birth the child is little more than an appetite. Food is the only thing that gives it satisfaction. Its interest is betrayed by its disposition to put everything it can lay hold of into its mouth. Soon it begins to manifest an interest in various objects. It reaches out and tries to grasp things, and in the effort to do so it is

[1] *Op. cit.*, p. 61.

[2] See Tanner, "The Child," Chicago, 1903, Chap. XIII.

slowly acquiring control of its muscles. Later it begins to imitate the movements and speech of those about it. "Up to the time of the second dentition," says Miss Tanner, "the interests are, to a large extent, confined to his delight in the feeling of his own activities and of his increasing control of them. On the physical side this appears in his enjoyment of plays that exercise his senses, in his practice of all movements that are a little difficult for him, and in his use of rhythm and of nonsense rhymes. On the mental side, it appears in his love of imagining and inventing, in his counting and measuring, and in his ceaseless questioning. The union of the two, and also the growth of his social interests, is marked above all by his love of imitation, the most characteristic interest of this period."

The interests of later childhood are thus summed up: "The interest in imitation is less prominent than before; the interest in imagining and wondering has become more clear-cut and related to the needs of life. It shows itself as a greater interest in the relation of means to end, in the mechanism of life, or, in a more abstract form, as a love of classification. The child at this time therefore begins to enjoy simple experiments, he likes to make collections, he is thinking more in the abstract."

The last educational period is "characterized," to quote Miss Tanner once more, not so much "by the rise of new interests, as by the broadening and deepening of

those already existent. . . . The most notable development of the period is doubtless the growth of the interest in persons, which comes as the direct result of the sexual development of this age."

A "rough sketch" of the order of succession of the main classes of interests, based solely on their periods of predominance, is thus given by Claparède:[1] "First year, perceptive interest; second and third years, glossic interests (Gr. *glossa*, tongue); three to seven years, general interests — intellectual awakening (questioning age); seven to twelve, special and objective interests; twelve to eighteen and after, ethical and social interests."

This brief résumé of the order of interests is sufficient to show that the points of beginning, in the control of interest, vary with the age of the child. They must be known, however, and must not be disregarded. No mistake on the part of the teacher is, perhaps, more frequent than that of beginning with his own interests rather than those of the children. The high school teacher, for instance, will sometimes unload upon the boys and the girls the identical course that he has taken in the university. Supposedly it was designed for persons of his age, knowledge, and experience. He found it interesting. But to his pupils it is wearisome, because they are not properly prepared for its reception; it is not adapted to their needs. Begin, then, with the child; determine

[1] *Op. cit.*, p. 174.

his native interests, the interests due to his habits, stage of development, and his environment, and make them the point of departure. This is the first injunction that must be observed in attempting to solve the problem of interest.

4. **Select Commendable Interests.** — The second injunction that should be followed in the art of controlling interest is, select as points of departure the interests that, when expanded and intensified, will be of most value in life.

In a normal child all interests have their value. Vice, it has been said, is only virtue gone to seed. So, from our present viewpoint, viciousness, self-indulgence, and all the other anti-social qualities arise merely from the overstimulation and indulgence of necessary and desirable interests. The glutton, for instance, is the person whose appetite for food has been allowed to become excessive; the thief, the person whose desire for property has become relatively stronger than high personal interest, etc. Generally speaking, however, the interests that should be selected for stimulation are those that in their nature are least selfish. The process of evolution, extending through long periods in which intensely selfish interests were necessary to self-preservation, has given to these interests such strength and persistence that they need little encouragement in the schools. Take, for instance, by way of illustration, the native interest arising from the competitive instinct, the interest

manifested in the spirit of rivalry. This interest has undoubtedly been of great value in the struggle for existence. It is therefore deeply implanted. It is easy to secure results by appealing to this interest, and it should not be disregarded; but it is not one of the interests which should be selected for special encouragement and stimulation. Care should be exercised, therefore, in marking the papers of children, and in offering prizes, to prevent such methods of stimulation from resulting in increased selfishness. The method of prize giving in unskillful hands may, indeed, lead to decidedly injurious effects both upon the successful pupil and upon those who are unsuccessful. The winning of a prize is not necessarily an evidence of superior merit. The result, therefore, may be an unwarranted sense of superiority in the successful pupil and an unwarranted feeling of inferiority on the part of those who are unsuccessful. Both are injured by such feelings. Prize giving, then, while not wholly to be condemned, should be resorted to only when better methods fail. The disposition to beat some other pupil should be turned, when possible, into a desire on the part of the child to surpass himself. Even the fighting impulse may be turned to advantage if the child can be led to exercise it in conquering difficulties. When a hard problem arouses the combative instinct, and thus calls forth the powers of the child and exercises them in its solution, this interest becomes one of the greatest aids to the teacher.

Select, then, the interests that are unselfish, and enlarge, expand, and intensify these interests.

5. Associate New Ideas and Objects with Those That Are Natively Interesting. — In the process of expanding and deepening interest the greatest care must be exercised to associate new ideas and objects with those that already possess an interest for the child. Assuming that the teacher knows what the native interests of the child are, and has selected a commendable interest to be appealed to, we may now see how an object not in itself interesting to the child may acquire an artificial interest. It is by associating it with something that is natively interesting. "An object not interesting in itself," says Professor James, "may become interesting through becoming associated with an object in which an interest already exists. The two objects grow, as it were, together; the interesting portion sheds its qualities over the whole; and thus things not interesting in their own right borrow an interest that becomes as real and as strong as that of any natively interesting thing." Again he says, "Associate the new with the old in some natural and telling way, so that the interest, being shed along from point to point, finally suffuses the entire system of objects of thought."[1]

This step in the method of arousing interest might be inferred from the mind's process of acquiring knowledge. It proceeds from the known to the related un-

[1] *Op. cit.*, pp. 94, 96.

known. Ideas and objects too far removed from present knowledge and experience possess no interest. We might say, then, that in developing interest we must observe the simple yet fundamental psychological principles, such as: proceed from the known to the related unknown, from the simple to the complex, from the concrete to the abstract, from the particular to the general, etc.

6. Interest and Use. — In the presentation of new ideas and objects some sense of their personal value must be given if interest is to be aroused. If on examination a thing is declared by the child to be "no good," it at once becomes uninteresting. In all investigations of children's interests it has been shown that their interest rests, as a rule, upon their idea of the utility of an object, or what they can do with it. This fact shows clearly enough that if interest is to be awakened in an idea, a thing, or a subject, the child must be made to feel that it is of some use. This feeling may oftentimes be given by the construction of artificial opportunities to use whatever may be presented. "The principle here in question," says O'Shea, "is universal in its application. The pupil will gain his reading and writing and spelling most effectively by using them in a vital way. They must not be set apart from his active life, but must be made the means of his gaining useful knowledge and recording it, and communicating with his friends. I see

children as early as the sixth year strive with all their might to write well when they wish to send a letter to some friend. Then they will give attention to chirography and spelling. I see them digging out words, and seeking help from every source, when they wish to get at the story in some interesting book. University students must be driven to study German or French when they have, so far as they can see, no use for the language; but when a professor needs it to carry on his researches, or his studies in foreign countries, then observe how vigorously he attacks it, and what progress he makes."[1] This injunction with respect to use might well be inferred from the relation already shown between interest and utility. Utility is the basis both of instinct and of interest.

7. Awaken Interest in Remote Ends. — It will easily be seen that the remoter the end may be in which interest is aroused, the more widely diffused the interest becomes because of the wider range of means for realizing the end, upon which means the interest in the end is reflected. If, for instance, a child should become sufficiently interested in a great moral personage, so that his interest in that person leads him to strive to become like him, everything recognized as a necessary means to that end becomes interesting, and the problem of interest in his case is practically

[1] M. V. O'Shea, "Dynamic Factors of Education," New York, 1906, p. 43.

solved. But even if this be not possible, great advantage is to be derived from interesting the child in an object or achievement which cannot be attained or accomplished without a series of means. Emerson has suggested a good example of such an interest. "In London, in a private company," he says, "I became acquainted with a gentleman, Sir Charles Fellowes, who, being at Xanthus, in the Ægean Sea, had seen a Turk point with his staff to some carved work on the corner of a stone almost buried in the soil. Fellowes scraped away the dirt, was struck with the beauty of the sculptured ornaments, and, looking about him, observed more blocks and fragments like this. He returned to the spot, procured laborers, and uncovered many blocks. He went back to England, bought a Greek grammar and learned the language; he read history and studied ancient art to explain his stones; he interested Gibson the sculptor; he invoked the assistance of the English Government; he called in the succor of Sir Humphry Davy to analyze the pigments; of experts in coins, of scholars and connoisseurs; and at last in his third visit he brought home to England such statues and marble reliefs, and such careful plans that he was able to reconstruct in the British Museum, where it now stands, the perfect model of the Ionic trophy monument, fifty years older than the Parthenon of Athens, which had been destroyed by earthquakes, then by iconoclast Christians,

then by savage Turks. But mark that in the task he had achieved an excellent education, and had become associated with distinguished scholars whom he had interested in his pursuit; in short, he had formed a college for himself." [1]

We have, in this account, a glimpse of the entire mechanism involved in the process of arousing interest. The teacher selects an appropriate object of interest, shows its appropriateness by leading the child to recognize its personal value, associates it with objects of interest, and thus impels the pupil to strive for its attainment. In the process of striving to realize an end, all things necessary to attain it become interesting as means, and these acquired interests become permanent, by virtue of their relation to the personal fortunes of the child and by habit.

8. **Appeal to as Many Senses as Possible.** — To awaken interest it should go without saying that an appeal should be made to every sense possible. It is customary to rely to too great an extent upon the auditory sense. Opportunities should be given not only to hear, but also to see, and, when possible, to touch and to handle. Here is suggested the value of models, pictures, maps, etc., and the necessity of frequent drawing, modeling, writing, etc.

9. **Arrange the Work So That It Will End in Pleasure.** — It is difficult to arouse in young children interest

[1] Emerson, "Complete Works," Concord Edition, Vol. 10, pp. 145–146.

in remote ends. With little children the end coalesces with the means, as, for instance, in play. Play is almost the only thing in which they are interested. It should therefore be enlisted, especially in the education of infancy. Later a gap may be made between the end and the means, and it should be rapidly widened. Care should always be taken to have the end involve pleasure. Every form of effort should be exerted in the direction of an end which results in satisfaction, ease, comfort, in some agreeable condition of the self. The child should be led to work for something, not to avoid something. Reliance upon negative interest of any kind to secure results is a bad method. It is easy to stimulate children to activity through fear of punishment, but only the unskillful teacher resorts to fear. If we reflect upon the activities of the world in general, we find that what carries men and women most successfully through all forms of labor and trials is hope, — the hope that their toil and suffering, no matter how acute, may result finally in satisfaction. Take away this hope, and the mainspring of all civilization would be removed. The school should take this lesson from life, and see to it that, artificially if necessary, the end of the child's labor be made a feeling of satisfaction.

10. **Approve when Possible.** — If the teacher is able to make himself liked by the children, he has it always within his power to make the end of commendable effort pleasurable by the bestowal of commendation.

Everybody likes to have the approval of those whose opinion is respected. It is not surprising, then, that the child is stimulated by the approval of a respected teacher. Of course, self-approval should bring most satisfaction. But the ability to judge one's own work, and the habit of doing so, is a manifestation of a high order of character, and until that character is reached, the approval of the teacher may be used to great advantage.

11. **Be Interesting.** — Finally, to arouse the interest of children in any subject the teacher must himself be interested and interesting. Other things being equal, the teacher who is most deeply interested in a subject will be most successful in interesting children. Interest, it is sometimes said, is contagious; but this, of course, is only a figurative expression. What is meant by it is that the teacher who is interested is most likely to present the idea or object in an interesting light, is most able to associate it with objects natively interesting.

The teacher, therefore, cannot be too careful to keep alive an interest in all that he is called upon to teach. This is true not only with respect to school subjects, but with regard to all the worthy ends of life. He owes this to himself as well as to the children. For unless these interests receive proper encouragement, they will, by and by, suffer the penalty that nature inflicts upon those who do not try consciously to preserve their interest in commendable objects, and to extend its range. The oft-cited example of Darwin's loss of interest

should be a special warning to the teacher, who will perhaps not have the compensation that Darwin found in his extraordinary interest in nature. "Up to the age of thirty or beyond it," he said, "poetry of many kinds, such as the works of Milton, Gray, Byron, Wordsworth, Coleridge, and Shelley, gave me great pleasure, and even as a schoolboy I took intense delight in Shakespeare, especially in the historical plays. I have also said that formerly pictures gave me considerable, and music very great, delight. But now for many years I cannot endure to read a line of poetry; I have tried lately to read Shakespeare, and found it so intolerably dull that it nauseated me. I have also almost lost my taste for pictures or music."[1] The neglect on the part of the teacher to keep alive a wide range of interests will not only result in lessening his power as a teacher, but also in rendering it impossible for him to become interested in the worthy and beautiful objects of nature and art, even if the opportunity should present itself.

The curse of our modern industrial conditions, at all events a great danger incident to the necessity of devoting so large a part of life to a chosen occupation, is the tendency it has to narrow the interests of all of us to the work in which we are necessarily engaged, and to the things with which we are brought immediately in contact. Hence it is that the conversation of so many

[1] Charles Darwin, "Life and Letters," by George Darwin, New York, 1901, Vol. I, p. 81.

people is limited to "shop talk." Hence it is that when released from labor so many people "do not know what to do with themselves." To avoid this danger, every one should take the advice of Goethe and make it a life-long practice to read every day a good poem, to look at a good picture, and to listen to a good piece of music. "Whatever your occupation may be," said Charles Eliot Norton, "and however crowded your hours with affairs, do not fail to secure at least a few minutes every day for the refreshment of your inner life with a bit of poetry."

CHAPTER VIII

THE FACTORS OF EDUCATION

Nihil est in intellectu, quod non fuerit in sensu. — COMENIUS.

The nervous apparatus of a developed organism yields to two great classes of sensations, which may be roughly classed as *external* and *internal*. — WARD.

1. The Meaning of Factors. — We have now shown that education as an art is limited wholly to the control of the educational forces, that is, the feelings, broadly understood, and that it practically amounts to the control of interest; that interest is the particular feeling aroused by an object, or an end of action, that is regarded by the self as capable of promoting or thwarting its purposes, and that this feeling has an impulsive power; that is, it is the motive to all voluntary action. Some of the methods of controlling interest have been suggested and discussed. It now remains to consider the means that may be employed in the process, that is, the factors of education. To these we shall now direct our attention.

The word "factors," in a broad sense, means those elements, circumstances, or influences that tend to the production of a given result. With respect to education,

however, we shall limit its application to the means of stimulating feeling, and especially interest, since with educational stimuli alone is the art of education immediately concerned.

2. **Heredity.** — With this limitation of meaning, it will be seen that the ordinary division of the factors of education into heredity and environment is not permissible. Heredity is the transmission of mental and physical qualities or characteristics from parent to offspring. With this transmission education can have nothing to do, unless by education is meant the transformation of the species. Heredity is properly a factor in organic evolution, but not in education. It presents a biological, rather than an educational, problem. Its control is a matter that properly belongs in the field of Eugenics.

As a matter of fact, the physical and mental inheritance of a child is but the stored-up results of past environment, that is, the environment of his ancestors back to the beginning of the evolution of life. In the not especially enlightening debate that now and then takes place in educational circles on the relative influence of heredity and environment, those who take the side of heredity are merely contending that the influence of past environment, extending through millions of years, is greater than that which is exerted by the environment acting through the brief period of a lifetime; and this is undoubtedly true. A recent writer, in discussing the subject of heredity, says that "every man of science

who has taken up by exact methods the old case of nature against nurture has reached the conclusion that inheritance is the important matter, and that environment counts for comparatively little."[1] Although this remark reminds one of the almost invariably fallacious contention, "all history teaches," etc., it may be admitted without affecting in the least the truth of the proposition that the environment is the sole means of education.

Again, the effects of environment are often mistaken for those of heredity. There are various families that are supposed to illustrate in their descendants the powerful influences of heredity. It is said, for instance, that the descendants of a certain drunken and dishonest German woman, who died in 1794, have been traced as far as they could be found. Seven of them had suffered as murderers, seventy-six had been more or less frequently in prison, costing the country about a million dollars in seventy-nine years; two hundred and eight were professional beggars, and one hundred and eighty-one were vicious women. The classic examples of heredity in this country are the Jukes family and the descendants of Jonathan Edwards, the New England theologian. The Jukes family, originating in 1720, has contributed in five generations twelve hundred known descendants, of which three hundred and ten were professional paupers living in almshouses, four hundred

[1] E. T. Brewster, *McClure's Mag.*, Vol. XXXVIII, No. 5 (September, 1911), p. 495.

and forty were physically wrecked by their own wickedness, one hundred and thirty were convicted criminals, sixty were habitual thieves, and seven were murderers. More than half of the women were immoral. On the other hand, the family of Jonathan Edwards, who died in 1758, had, in 1900, one thousand and ninety-four known descendants. Of these, thirteen were college presidents, three were United States senators, sixty-five were college professors, thirty were judges, one hundred were lawyers, sixty were physicians, seventy-five were officers in the army and navy, one hundred were clergymen, missionaries, etc., sixty were prominent authors and writers, two hundred and ninety-five were college graduates, eighty held public office, and no member of the family had ever been convicted of a crime. These two families are often presented as striking examples of the influence of heredity, but they might also be cited as equally striking examples of the effects of environment. It must be obvious that of two children of equal natural ability, one born in the Jukes family, the other in the Edwards family, the latter would stand a far better chance to become a useful and law-abiding citizen than the former, because of his superior environment. Think of the incentives of a child born in the Edwards family, with hundreds of examples of achievement among his own relatives, surrounded by ample material means of comfort and culture, with lofty ideals ever present to his imagination, and the utter lack of any in-

centives at all on the part of a child in such a family as that of the Jukes. It has been well said that it is the tendency of heredity to create an environment that perpetuates the heredity.

It is impossible, of course, to draw the line between the effects of heredity and the effects of environment, but there are strong reasons for believing that the admittedly powerful influence of heredity is oftentimes greatly overestimated. Indeed, evidence might be adduced to show that the tendency of modern scientific opinion seems to be toward the conclusion that nature gives to every generation a fresh start. "There is little, if anything, in fact, to justify the conclusion that neglect, poverty, and parental ignorance, serious as their results are, possess any marked hereditary effects, or that heredity plays any significant part in establishing the physical degeneracy of the poorer population." Such is the testimony of Dr. Alfred Eichholz, one of His Majesty's Inspectors of Schools, a Doctor of Medicine, and formerly Fellow and Lecturer of Emmanuel College, Cambridge, before the British Inter-Departmental Committee on Physical Deterioration,[1] and it is supported by many other authorities of the medical fraternity. But whatever be the truth with respect to the relative influence of heredity and environment, all

[1] The quotation is from a partial transcript of the testimony taken by the Committee. See John Spargo, "The Bitter Cry of the Children," New York, 1906, Appendix C.

will agree that, while society, by wise restrictions with respect to marriage, should endeavor to bring it about that every child should be well born, it should be equally concerned that when a child is born into such a family, for instance, as that of the Jukes, it be given a better chance in life by throwing about it an improved environment. The environment, using the word in a broad sense soon to be indicated, is the sole means to be employed in controlling interest, or indeed in the entire work of education.

3. **Environment.** — By the environment is meant all the agencies and influences, material and immaterial, that may in any manner affect the activities of the child. It includes every form of both extrinsic and intrinsic stimuli. It is objective and subjective. The objective environment is the totality of the surrounding or extrinsic conditions, the sum of the agencies and influences that may affect a child from without. The subjective environment consists of the ideas and ideals stored up in the mind, which may without the immediate action of any outside influence become the antecedents of action. It is important that the distinction between these two forms of the environment be thoroughly grasped. Perhaps an illustration may help to make it clear.

Every one is aware that when two persons are brought into exactly the same external conditions their behavior may be widely different. Apparently they are subjected

to the same stimuli. Why, then, are different effects produced? It is because the inner conditions, the environments within, the subjective environments, are not the same. One, let us say, is a man of culture, the other an ignoramus. Stimuli from without must, with the one, encounter a large number of counteracting stimuli from within, due to the ideas and habits derived from past experience; while, in the other, such counteracting stimuli are necessarily different or wanting. If ideas were derived only from sensations, that is, from objective stimuli, and were not subject to recall, there would be no such thing as the subjective environment. But ideas derived from sensations may be recalled, and by reflection upon them, new and different ideas may be formed. These new ideas and those recalled may serve the same purpose in stimulating to action as the stimuli from the objective environment. The subjective environment is therefore as potent a factor in the control of the educational forces as the objective. The distinction is by no means pedantic.

4. **The Objective Environment.** — With this understanding of the environment, it will hardly be denied that every form of action must proceed from it. There can be no other source. But now that we have drawn the distinction between the subjective and the objective environment, and now that due account has been taken of the two sources of action, we must not fail to perceive that the art of education is entirely limited, in its

effort to control interest and action, to the objective environment. It is the only means available for affecting, in the slightest degree, the inner life. In the process of controlling the current of interest, which is the primary object of education, we are as much limited to outward circumstances as we would be in the effort to control a current of electricity or a current of water. The onward flow of a river, for instance, is determined by the force of gravity. Because of the existence of this force we have a fact in nature that is usually expressed in the declaration that water "seeks its level." By taking advantage of this fact, or law, the course of a river may be deflected or changed. The direction and velocity of its current depend upon the slope of its bed. It is the bed of the river and its banks, therefore, to which attention must be directed if the current is to be affected. So, in the case of interest, we recognize the fact that activity in accordance with interest is a great law of mind. This activity may be affected by the teacher only by such a predisposition of circumstances as will guide its motive force into the desired channel. The only factors under his control are those wholly objective. The primary factors of education, then, lie within the objective environment.

The objective environment includes, as was said before, all extrinsic circumstances. It presents at least eight different phases. They are the physical, the intellectual, the industrial, the political, the social, the

domestic, the esthetic, and the religious phases. The physical environment is represented by climatic conditions; the intellectual, by science; the industrial, by labor; the political, by the state; the social, by society in the narrow sense; the domestic, by the family; the esthetic, by the beautiful; and the religious, by the good. There is no part of the environment that may not affect activity and consequent development. Every object the child sees, every book he reads, every friend he meets, leaves him a different being from what he was before.[1] Exposure to the sun will tan his skin. Barometric variations will affect his nerves, his irritability, his temper. The air he breathes, the water he drinks, the food he eats, all produce organic changes. It is none the less true that evil communications corrupt his manners; that a landscape or a picture may stimulate his imagination; that the proper examples from history or fiction may inspire him to heroic action. Feuerbach has said, "Man is what he eats." That is only partly true. Man is what he experiences. Thus Tennyson writes, in the poem "Ulysses," "I am a part of all that I have met."

The opportunity of education, then, lies in the provision or construction of an objective environment, which will induce such activity on the part of the child as is appropriate to its proper development. The problems of education, while they are always problems of interest,

[1] "Emerson's Complete Works," Concord Edition, Vol. 10, p. 129.

are at the same time problems with respect to the proper transformation of the child's environment. Method in education is nothing more than the application of intelligence to the arrangement of the environment so as to produce, most economically, the desired effects upon the child's activity.

5. **Environment and Action.** — Just how the environment may stimulate to activity is sufficiently obvious in many cases of bodily movement. We feel the heat of the sun, for instance, and seek the shade; we are cold and approach the fire; we fear the effects of a storm and betake ourselves to shelter. In other words, we act in such cases in response to feelings immediately evoked by climatic conditions. It is to be noticed, however, that the real force in operation is feeling and not the environment. The environment in no case should be regarded as a force. It affects the thought and life of the child only indirectly, that is, through the senses. The child approaches the fire, feels the heat, and moves away. But the fire is not the force that moves him from one position to another. He is shown a picture; he likes it; it suggests ideas, aspirations, and these will influence his conduct; but the picture affects him only through the eye and his emotions. The environment, then, acts in education only indirectly, that is, through suggestion and imitation; not as a force, but as an instigator of force. It suggests ideas, ideas tend to manifest themselves in action, and activity results in development.

The immediate cause of activity is always some form of feeling.

The exact method by which the environment indirectly produces action may be briefly illustrated. Let us suppose that a picture or a story is exhibited to the child and his interest is aroused in it. It suggests an idea; but an idea, as has already been remarked, tends inevitably to manifest itself in action. If, to the mind of the observer, an evil thought is suggested, the tendency, of course, is to evil action. The reverse as inevitably happens if the suggestion is of the opposite character. The presentation of the object, attention, interest, suggestions, ideas, feeling, activity, development — these form a chain of educational causes, the outer link of which is in the environment.

Suppose, then, once more, that in the work of education we wish to produce a desired form of activity, with its resultant form of development. We have only to provide the appropriate stimuli. This can be done only by bringing the child into responsive contact with such elements of the environment as will awaken interest, suggest ideas, and evoke feelings that will translate themselves into the peculiar activity appropriate to the desired form of development. To know what these elements are, and to bring them to bear upon the being we wish to educate, — that is the art of education. Of course, by "bringing them to bear" I mean the awakening of interest in them. The mere presentation of objects

may produce no appreciable effect. A large part of the environment may never become effective in education or in life, for the reason that it does not touch "the springs of action." The best teacher is merely the one who is most skillful in arranging the child's surroundings so that the things that attract his attention and move him to action are those that will produce the best results.

6. Institutional Factors. — Organization of any part of the environment for a specific purpose constitutes an institution. Education, as a conscious process, is largely effected by institutional means. Chief among the institutional factors of education are the school, the home, the Church, and the State. These are, of course, merely the most prominent of the institutional agencies which effect education. They have been discussed so frequently in educational treatises, and from so many points of view, that all that is necessary here is to place them in the proper perspective and to offer some suggestions with respect to their coöperation. They are merely organized forms of the environment with varying degrees of educational purpose. The thing desired is the intensification of this purpose, with the improvement and educational coöperation that would necessarily follow. Let us first glance briefly at the school.

7. The School Environment. — The educational knowledge and interest of a community is best exemplified by the character of its school. The school should represent a conscious effort on the part of the community to

create for its children an ideal environment. It provides a building, grounds, and equipment, and employs a teacher. The teacher is obviously the most active and effective factor of the school, and public interest in education in some communities is so far advanced as to demand, and to be willing to pay for, a good teacher. An effective teacher may accomplish wonders, but even a perfect teacher could not achieve the best results without the assistance of other factors in the environment. It is only the exceptional community that recognizes that the total results in the scholastic education of its children will necessarily depend not only upon the character of the teacher, but also upon the character of the school buildings and equipment as well. A good school implies much more than is usually considered of importance in the establishment of a school, particularly of a public school. The building should embody in its construction the most recent knowledge with respect to light, heat, ventilation, and general comfort. The desks, seats, wall decorations, etc., should be selected and arranged with as much regard for their cultural effects as are the furniture and furnishings of a cultured private home. The grounds should be well located for all the necessary purposes of play and exercise; they should be sufficiently large for a school garden and a shop, and should be beautified by the art of the landscape gardener. Since children are affected by all the factors of the school environment, these should

all be made to approximate the ideal. The value of the school as an instrument in education varies directly with the degree in which this approximation is realized. The school should be a social center in which the highest ideals of art and culture find expression.

Of course, a most important feature of the school environment is knowledge, the information provided by the various subjects in the course of study. Here is a chance for a much-needed reform. In the education of the past the "humanities" have played too large a part; nature has been neglected. The dead languages have received more attention than the living languages. History has devoted too much attention to wars, dynasties, and the vicissitudes of the ruling class. When attention is turned, as it should be, chiefly to the natural sciences, children will come forth from the schools with at least an elementary knowledge of cosmic, biological, and social evolution. They will have a correct view of the world they live in, and will regard themselves not as standing outside of and opposed to nature, but as representing its highest and noblest product. "The school of the twentieth century," says Haeckel, "will have for its main object the formation of independent thought, with a clear understanding of the knowledge acquired, and an insight into the natural connection of phenomena."[1]

Such a school as is here suggested is an ideal that

[1] Haeckel, "The Riddle of the Universe," p. 364.

will seem to some quite remote, but it will be progressively realized, as the public approaches real earnestness in the matter of education, and becomes thoroughly acquainted with the significance of the school environment. When one takes a look at the school it has provided, there is an element of amusement, as well as of discouragement, in the boast of the average community of its interest in education. The spirit of complacent satisfaction manifested by the public with respect to the average school is comparable only to the naïveté of a child.

8. The School and the Home. — The home, like the school, is merely an artificial phase of the environment. The art of education is best subserved when the home manifests a high degree of consciousness with respect to the educational influence it exerts, and organizes itself accordingly. Such organization implies the introduction of approved school methods into the home. The school and the home should coöperate.

One of the methods of securing the coöperation of the home in the work of the school is school visitation. Parents are urgently requested to visit the school, and it is usually supposed that the visit of a parent is a necessary indication of school interest. Such is not always the case. A parent may visit the school merely to make his word good. His presence there may be a bore to him. If, perchance, he professes an interest in school teaching and school management, it may

be that he will turn out to be an active and incompetent critic, and he will naturally feel a certain resentment if his criticisms are disregarded. The most effective school visitation is on special days set apart for the purpose, when all the patrons are invited and a special effort is made to engage their interest. Parents, as a rule, will be more interested in an exhibit of what their children have accomplished under the instruction of the teacher than in the teacher's methods of accomplishing his results. For this reason Patrons' Days and exhibits of school work are to be commended.

But school visitation by the patrons of the school is not sufficient. There should be home visitation by the teacher as well. For all the teacher may know, there may be influences in the environment of the home that tear down as fast as he builds up. He strives, let us say, to cultivate a taste in the minds of the children for good literature. But in the home there may be only trashy books containing blood and thunder stories, which engage their leisure hours. To put a good book, a good journal, a good picture, into such a home is to render a valuable service to the children and to increase the teacher's own chance of success in promoting their advancement. Parents will complain sometimes that they are too poor to provide such things for their children; but in the majority of cases it will be found that not poverty, but indifference, is in the way. If the money that is spent unwisely by the average family were

expended with a distinctly educational purpose, the children might be amply provided with the things necessary to promote their education. The poor as well as the rich spend money for things that they do not need. Booker T. Washington, in speaking of the homes of the negroes of the South, says that he sometimes goes into a house that is a mere hovel. There is no floor but the ground; no bed except one of poles and brush in a corner; no furniture or utensils except of the rudest construction; but upon the wall he finds an expensive clock, and there is not a single member of the family who can tell the time of day by it! Extravagances similar, if not so extreme, are practiced in many a home. I have seen the picture of the home of an Indian family, in the yard of which was a piano used as a coop for chickens. By careful and diplomatic effort the teacher may direct the parents of the children in his school to a wiser expenditure of money in the direction of providing a home environment that will coöperate with the environment of the school.

9. **The School and the Church.** — For the same reason that the art of education must endeavor to bring into harmony the environment of the home and the school, it must also invite and secure the coöperation of the Church. The school and the Church are really one in purpose so far as the children are concerned. The object of each is instruction. This is effected by bringing them into contact with knowledge, ideas, personalities, and purposive combinations of material circumstances.

This unity of purpose should not be disregarded. It should result, so far as possible, in a unity of means and methods. Here again the teacher is an important factor. Even if he be indifferent to the claims of orthodox religion, his art will not allow him to disregard the Church as an element of the moral and ethical environment that exerts its influence upon the development of the child. The qualities of art and music and the character of instruction in the Church cannot be matters of indifference to him. He strives in the school to develop an interest in music. In the congregation of the Church, or perhaps in the choir, the children sing. He must be interested in what and how they sing. In the school he encourages a love of good books; in the Church the attention of the children is drawn to the Book of Books; sometimes, it must be confessed, in a way that breeds repulsion. The pastor instructs the people of the community; the teacher will endeavor to secure his assistance in the diffusion of sound ideas with respect to education. But the teacher should not be expected to assume the entire responsibility of securing the cooperation of the school and the Church. The relation between these two institutions should be reciprocal. The Church should definitely recognize the school as a coöperating agency. It can do much to stimulate the work of the school by the courteous recognition of the teacher, by planning coöperative work, by devoting a Sunday now and then entirely to the subject of educa-

tion. It is absolutely essential to the successful practice of the art of education that these two institutions shall be in the closest sympathy and give mutual help and coöperation.

Sectarian teaching, however, must be carefully excluded from the school. The various forms of belief are matters of private concern, and should be left to private attention. The only subjects of a religious nature to which the school may properly give attention are ethics and comparative religion. It will not be necessary to exclude the Bible, but biblical history should be taught as the history of Greece and Rome should be taught, that is, with the same expectation of finding myths and legends in the one case as in the other; and the Bible should be studied, not as a whole, but in carefully selected extracts. There is no good reason why in the presentation of the Bible to children the same expurgation should not be practiced as is exercised upon the works, say, of Shakespeare.

10. **The School and the State.**—What has already been said with regard to the relation of the school and the home and the Church perhaps sufficiently indicates the relation that should exist between the school and the State. By the State is meant, of course, the people as politically organized. The school is an institution established by the State. The State, then, endeavors to practice the educational art. It is, in a sense, the controlling factor. If education is a result of the environment and

depends entirely upon it, the State is neglectful of its own purpose if it permits any part of the environment to act unfavorably upon the child. It should recognize, at once, that its purpose cannot possibly be realized if it permits any part of the lives of the children to be spent in an unfavorable environment. For exactly the same reason that it establishes the school, and endeavors to create an ideal environment there, it should attack and improve the environment of the slums and of backward rural communities. For exactly the same reason that it builds schoolhouses and employs teachers, it should prohibit child labor that is injurious, enforce compulsory education, and do all else that can be done to improve the environment to the end that its citizens may be properly educated. It has been well said that "If the modern state gives every citizen a vote, it should also give him the means of developing his reason by a proper education, in order to make a rational use of his vote for the commonweal." A "proper education" is the result of the influence, not of a part, but of the whole of the environment.

11. **The School and the Community.**—By the community is here meant all the organized and unorganized social elements of the environment not included in the institutions already named. All these different phases and elements of the environment affect, constantly, though it may be unconsciously, the success of the school and the life of the child. All who are interested in ed-

ucation should consciously strive to make these agencies educationally effective. The wide-awake teacher will ally himself, in a tactful way, with community interests, and especially with those most closely related to the life and conduct of his pupils.

To mention but a single opportunity of the teacher for the exercise of a helpful educational influence in the community, I will call attention to the possibilities of directing the various forms of amusement practiced at "parties" and "socials." Suppose, for instance, that the teacher is invited to attend one of these functions, and finds, as it sometimes will happen, that the games and plays there indulged in are more or less undignified and degrading. He can be no more indifferent with respect to them than to other phases of the environment. In such a case he will endeavor skillfully to lead the young people to higher forms of amusements. Education demands that *all* phases of the environment be brought into harmonious coöperation in order to produce ideal educational results.

No teacher, then, who is really interested in the work of education and not merely in drawing his salary, can be content if the influences of the school, so carefully devised and exerted, are counteracted by the unfavorable environment of the home and the community. While his primary object will necessarily be the perfection of the influences of the school in order that these may be most effective, he cannot be indifferent

to the character of the homes of the children, and the paternal and community interest in education. Every teacher knows that he must please the patrons of his school, otherwise he will soon be obliged to resign. Some, indeed, are so anxious to please that they become obsequious. But the effective teacher endeavors to please in order that he may the better secure active interest and coöperation in the work that he is trying to do. He will employ every legitimate means of making the community, the home, the church, and the state environment reënforce the educational influences of the school. The chief difficulties he will encounter will be due to public indifference to new ideas, and the disposition to approve only what corresponds to established precedent.

CHAPTER IX

IDEALS AS A FACTOR IN EDUCATION

A genuine interest in the ideal indicates of necessity an equal interest in all the conditions of its expression. — DEWEY.

Still, through our paltry stir and strife,
Glows down the wished Ideal,
And Longing moulds in clay what Life
Carves in the marble real. — LOWELL.

1. The Subjective Environment. — In the preceding chapter, attention was devoted exclusively to the objective elements of the environment. We saw how they may influence action through the senses; how they are organized into various institutions, and how the coöperation of all these institutions is demanded for the realization of educational purposes.

We have learned, however, that there is another phase of the environment; that the immediate stimulus to action may lie within the mind as well as without; that ideas, although originally derived from contact with the objective environment, are stored up in the memory and are, therefore, subject to recall; that when so recalled they may induce action; that by reflection, that is, by a comparison, a combination, or a fusion of ideas, new ideas may be constructed, and that these

in turn may stimulate to action. Now the stock of ideas stored in the memory and those arising from reflection constitute the subjective environment. To this part of the environment, and its relation to interest, we shall now turn our attention.

2. **The Objects of Interest.** — Interest, as has already been suggested, implies both a feeling and an object. No one can be interested without being interested in something. That something may be either material or immaterial. It may be a book, for instance, its size, type, style of binding, etc., or it may be an idea or ideal derived from reading the book. The lover of nature is interested in trees, flowers, a landscape, a sunset — the material objects about him, with their various combinations of form and color. But he will probably be interested also in purely mental conceptions of such objects, conceptions which have no objective reality. The business man is interested in commodities, prices, markets, means of production and transportation, and in all material things necessary to the conduct and success of his business. But he will also be interested in schemes for increasing his profits, in plans for finding or creating new markets, in standards of business conduct, and in general conceptions of what constitutes business success; all of which are ideals, since they have complete existence only in his own mind. The swain is interested in his lass, but the deeper his love, the more likely is he to idealize the

object of his affection until she becomes a phantom, a mere figment of the brain,

> "an ideal,
> A creature of his own imagination,
> A child of air, an echo of his heart."

There is, then, an ideal world as well as a real one, and purely mental constructions in the form of ideas, purposes, and ideals may be the objects of interest as well as the concrete existences of the real world about us. Thus we see that the subjective environment as well as the objective offers appropriate objects of interest.

3. **Ideas and Ideals.** — The subjective environment, while it is, of course, entirely ideational, may be divided properly into ideas and ideals. An idea is merely a mental image or picture. It may be a mere mental reconstruction of what has been thought, imagined, or perceived. Ideas are the materials of thought. The ideal is sometimes defined as the opposite of the real, that is, so as to include that which exists only in idea. With this definition it applies to all mental conceptions; alike to those "moving about in worlds not realized," and, it may be, unrealizable, and to those that find at least approximate realization in the products of art and civilization. But the word is also used to designate standards of human perfection, conceptions of what is desirable in individual and social life. Thus it carries with it a sense of desirability or of oughtness, and in-

cludes "what we long for," and all our conceptions of what ought to be. This is the sense in which the word is here employed. We may define an ideal, then, as a mental conception projected, so to speak, for future realization or attainment. The objects of interest, then, so far as the subjective environment is concerned, are ideas and ideals. Education should result in awakening interest in both.

There is a marked difference, however, between an interest in ideas and an interest in ideals. "There are," says Davidson, "two kinds of distinctions: distinctions of fact, and distinctions of worth. We distinguish one thing from another thing; what is from what is not. Such distinctions are distinctions of fact. But sometimes our attention is directed to the relation between a fact and a certain ideal in our minds. We feel that such and such conduct not only *was*, but that it *ought to have been*, or that it *was*, but that it *ought not to have been*. Now the interests that grow out of distinctions of fact as such are interests in *ideas;* while the interests that grow out of distinctions of worth are interests in *ideals*." [1]

An interest in ideas, then, may have no uplifting, no ethical or moral significance. There may be a strong appetite for facts without noble and generous impulses. Sometimes we are surprised by the pettiness, narrowness, and lack of idealism in men who are recognized as scientific specialists. In such cases there is an interest

[1] Quoted by Gordy, "New Psychology," p. 127.

in ideas, but not in ideals. Science may, indeed, be taught without much broadening moral influence, and there are certain sciences the pursuit of which offers small opportunity for the development of interest in ideals. Other sciences are rich in opportunities for awakening this form of interest, but the effect of these will depend largely upon the manner in which they are presented. Gordy cites the teaching of history as an illustration of the possible development through that subject of the two kinds of interest. "Taught in the right way," he says, "a study of it will develop in the pupil both kinds of interests. A pupil will be led to see the relation between events and their causes. He will see, for example, how the weak government of the Confederation was the natural expression of the lack of national patriotism, how the partialities of the Jeffersonian Republican party for France, in 1793, and of the Hamiltonian Federalist party for England, were the natural results of differences in temperament, surroundings, and the like. This perception of the relation between events and their causes awakens an interest which illustrates what I mean by interest in *ideas*. It is purely *intellectual*. It may be felt by a man who thinks that the only mistake made by Benedict Arnold and Aaron Burr was in not succeeding. An interest in the perception of numerical relations, or of mathematical relations in general is of the same sort: it is an interest in *ideas* — not ideals.

"But a pupil may also get from a study of history a radically different kind of interest. He may be led to see what the patriotic self-sacrifice of men has contributed to the making of our country what it is — that at every critical period men have been found who preferred to sacrifice their private comforts to the public good. And such perceptions may develop in him an admiration for genuine patriotism, and may slowly kindle in him a resolve to animate them. This is an interest in *ideals*."

An interest in ideas, then, is manifested in a desire for knowledge, a love of study, a passion for truth. The awakening of such an interest is a desirable end in education. It should be kept constantly in view in the presentation of the different subjects in the course of study, but at the same time it should be remembered that an interest in ideals is especially valuable, since moral character depends upon this form of interest. Ideals determine conduct. "As a man thinketh in his heart, so is he." You cannot tell much about a man by the sciences he cultivates, but if he reveals to you his ideals of life, you know the man. Ideals, then, are of incalculable value as a means of education.

4. **The Educational Value of** Ideals. — Teachers of all ages have recognized the value of ideals of veracity, valor, virtue, and of all the other desirable human qualities, as factors in education. Such ideals are embodied in the lives of great men. Hence, biography has always been regarded as a valuable means of instruction.

Plato, in the scheme of education set forth in the "Republic," assumes that the lives of the gods and of heroes will have a powerful influence over the minds of the young, and cautions against attributing to such exemplars any unworthy attributes. He would expunge from the poets passages that put them in a bad light. "We shall do well," he says, "to strike out the dirges put in the mouths of famous men, and make them over to women (and those not the best of their sex), and to the baser sort of men, in order that those whom we profess to be training up to be the guardians of their country may scorn to act like such persons."[1] Men of all ages since Plutarch's time have drawn from his "Lives of Illustrious Men," material for the nourishment of their virtues. "The great lesson of Biography," says Dr. Samuel Smiles, "is to show what man can be and do at his best. A noble life, fairly put on record, acts as an inspiration to others. It exhibits what life is capable of being made. It refreshes our spirit, encourages our hopes, gives us new strength and courage and faith — faith in others as well as in ourselves. It stimulates our aspirations, rouses us to action, and incites us to become copartners with them in their work. To live with such men in their biographies, and to be inspired by their examples, is to live with the best of men and to mix in the best company."

The greatest of all teachers presented himself to the

[1] The "Republic" of Plato, Book 2.

world as an ideal of individual life. "I am the way, the truth, and the life," he declared, and, "I, if I be lifted up, will draw all men unto me." What he doubtless meant was that if his life and character be lifted up and made the objects of thought as the ideals of men, they would draw men onward toward their realization. Jesus presented also to the world a social ideal. He talked of the kingdom of Heaven, by which he meant an ideal society to be realized some time, somewhere, in which the spirit of human brotherhood should dominate in all the affairs of men. He recognized that in the dust and conflict of life men need such an ideal to which they may now and then lift their eyes, and from which they may draw inspiration. "Where there is no vision the people perish."

That such ideals exercise a powerful influence on the minds of men is illustrated in the development of every nation, and particularly in the life of every social reformer. The heroes of our country were inspired by an ideal conception of what they wished the nation to become. Washington at Valley Forge, for instance, was sustained not only by his faith in the Almighty, but by his ideal of a nation freed from the domination of the Mother Country. In the most trying hours of the Rebellion, some one endeavored to discourage Lincoln by asking him how long he thought it would be before the South would yield and lay down its arms. He replied, "All we can do is to keep pegging away."

Evidently he did not mean that the pegging away should be without purpose. His ideal was the restoration of the Union, and all his efforts were exerted in the direction of realizing that ideal. His paramount purpose was to save the Union. With what persistence he pursued that purpose! He wrote to Greeley, "If I could save the Union without freeing any slave, I would do it — if I could save it by freeing all the slaves, I would do it — and if I could do it by freeing some and leaving others alone, I would also do that. What I do about slavery and the colored race, I do because I believe it helps to save this Union; and what I forbear I forbear because I do not believe it would help to save the Union. I shall do less whenever I shall believe what I am doing hurts the cause, and I shall do more whenever I believe doing more will help the cause. I shall try to correct errors when shown to be errors, and I shall adopt new views so fast as they shall appear to be true views."[1] So also in the case of William Lloyd Garrison. What enabled him to endure the taunts and persecution of the "broadcloth mob" in Boston? What gave him the courage to declare: "I will be as harsh as truth; as uncompromising as justice; I will not equivocate; I will not excuse; I am in earnest and I will be heard!" What, indeed, but his ideal of a Republic in which all men should be free? There is no reformer in the history

[1] Raymond, "The Life and Public Services of Abraham Lincoln," New York, 1865, p. 253.

of the world who has not been sustained and encouraged by an ideal of individual or social life, and every reform that has been initiated is a practical illustration of the influence of the ideal.

Literature is full of illustrations of the drawing, the sustaining, and the uplifting power of ideals. Hawthorne's story of the Great Stone Face is an example. The little story of how the violet got its color by gazing into the blue heavens is a symbolical presentation of the same thing. Lowell's poem, "Longing," is based upon the same thought. The fact that ideals exert a wonderful influence upon action, and to a considerable extent determine character will need no further illustration.

5. **Explanation of the Effects of Ideals.** — There is nothing mysterious about the influence that ideals exert upon conduct and life. If we will recall what was said in the effort to show how the environment exercises an influence upon action, the explanation will be obvious. The environment, it was there pointed out, suggests or occasions ideas, and ideas inevitably tend to manifest themselves in action. The "tendency to act" is an inevitable accompaniment of an idea. Now an ideal is but an idea or a complex of ideas. This being the case, it is plain that the ideal, a manifestation of the subjective environment, must act in the same way. From this inevitable tendency of the ideal to get itself realized in life we deduce the great law that ideals

mold character. Whom the child honors, he imitates. Wishing is the secret of becoming. "Your ideal is a prophecy of what you shall at last unveil."

If ideals are thus so influential in molding character, it is evident that they are a most valuable means to be employed in the art of education. Care must be taken to arouse the interest of pupils in the right kind of ideals. One of the main functions of the teacher, indeed, is to bring before the mind of his pupils lofty and worthy ideals of conduct and character, as exemplified in noble men and women, real or fictitious, and, by creating an interest in them, to awaken the impulse to commendable action. The performance of this function presents an opportunity for the exercise of the highest intelligence and skill.

6. **The Control of Ideals.** — Since an ideal entertained is always an object of interest, the process of controlling the formation of ideals is practically the same as the process of controlling or directing interest. The transformation of ideals is the transformation of one form of interest. The methods to be employed in supplanting ideals by other ideals of a higher nature are the same as those already considered in Chapter VI. We may say, however, even at the risk of some repetition, that success in the practice of the art of education, as it here applies, involves a careful study of the ideals of children at different periods of their development. It will be found, of course, that they vary in different children,

and in the same children at different times. If there is any truth in the culture epoch theory, it should throw some light on the subject. For if the evolution of the child recapitulates that of the race in any marked degree, his mental evolution must illustrate to the same degree the evolution of ideals in the race. Let us suppose that the child is at an age when military ideals make their strongest appeal to him. The wise teacher will not undertake to supplant that kind of ideal suddenly, but will emphasize the qualities of courage, devotion to duty, patriotism, and the like, and make them as conspicuous as possible in the ideals to which the child is naturally drawn. If the teacher finds, for instance, that the ideal of a pupil is embodied in a swashbuckler hero of blood and thunder fiction, he should not begin by denouncing such a hero. He should accept the situation, manifest an interest, if possible, in the idol of the pupil, and at the same time present for his consideration a type of hero not dissimilar, but one who manifests qualities of a higher kind. A boy who is interested in a dime novel hero is perhaps chiefly attracted by the adventurous experiences of the character, and by his skill in extricating himself from dangerous situations. But there are men of lofty type whose experience and character are similar, only their adventures have had social significance, and their skill was a manifestation of lofty intelligence rather than of craft and finesse, qualities exemplified to an equal degree, perhaps, in

some of the lower animals. To these men of nobler type his attention should be drawn. In a word, the process of directing a child's ideals should consist in the skillful exposure to his mind of ideals loftier than his own, but akin to them. The end of the process is the attachment of the child's mind to the truly great characters of history, and, if possible, to Him whose life best exemplifies the supreme virtues of men, an ideal character in whom there is "neither variableness nor shadow of turning."

One further word while we are on this phase of the subject. One needs only to reflect upon one's own experience to realize that, with or without education, ideals undergo a constant change. Sometimes the change is upward, sometimes downward. Education fails unless, from the beginning of the school course to its end, the ideals of the children become higher and higher. There is nothing more pitiable than an aged man or woman in whose life the change of ideals has been downward rather than upward, and whose age is filled with regret at the loss of youth's ideals.

"O glorious Youth, that once wast mine!
O high Ideal! all in vain
Ye enter at this ruined shrine
Whence worship ne'er shall rise again;
The bat and owl inhabit here,
The snake nests in the altar-stone,
The sacred vessels moulder near,
The image of the God is gone."

7. Personal Ideals of Success. — Taking into consideration, then, the transforming influence of the ideal, as already explained, the school can render neither the child nor society a better service than to awaken in the child a deep and permanent interest in worthy personal ideals of success. The school is a failure in proportion as it leaves the child with the idea that success, getting on in the world, is merely making money or achieving notoriety. With the vast amount of attention now devoted in our literature to men of wealth, with the recognition accorded them, and with the almost general disposition to defer to them, if not to respect and honor them, it is not surprising that a large percentage of children aspire to riches and accept as their ideal men who have most succeeded in the economic struggle for material goods. In various studies of children's ambitions it has been shown that, with both boys and girls, money is the leading motive. This motive, while a most desirable one, should not be permitted to dominate. The school, therefore, must endeavor to correct the misdirection of interest through the influence of sordid ideals outside the school. This is not to be accomplished by imparting precepts, as, for instance, "The love of money is the root of all evil." It is to be effected by leading the pupils to recognize the difference between men of means dishonestly acquired and men who have made money and used it without sacrifice of honor or honesty. They must be given true standards of judg-

ment with respect to men. They must be made to realize that society is in no great need of men who will get rich at any cost, but that it is sadly in need of the type of man who would scorn riches obtained by sharp practice. They must be brought to recognize that the true measure of a man is not what he has, but what he is; not his possessions, but his use of them and his means of acquiring them. The Bible asserts that a good name is rather to be chosen than great riches, and loving favor rather than silver and gold. The truth of this must be brought home to the children. Their ideals of success must be in terms of life and not in terms of the means of life, of which wealth is but one. Education should result in a perception of the fact that while wealth and economic success are good, there are many things that are better. The wealth that should be cultivated is wealth of character. There is deep significance in the well-known passage from Ruskin. "There is no wealth but life. Life, including all its powers of love, of joy, and of admiration. That country is the richest which nourishes the greatest number of noble and happy human beings; that man is richest who, having perfected the functions of his own life to the utmost, has also the widest helpful influence, both personal, and by means of his possessions, over the lives of others." In the sense in which Ruskin employs the term, wealth may be accumulated without impoverishing any one, and it is the only wealth that may not take wings and fly away.

Life, then, with all that the word means, is the ideal that should be entertained, and material wealth should be regarded as what it really is; namely, a means to the higher end.

When Alexander, on passing through Corinth, stopped to see Diogenes, who happened to be there at the time, he found him basking in the sun in the grove of Craneum, where he was mending his tub. "I am," said he to him, "the great king Alexander"; and "I," replied the philosopher, "am the dog Diogenes." "Are you not afraid of me?" continued Alexander. "Are you good or bad?" asked Diogenes. "Good," rejoined Alexander. "And who need be afraid of one who is good?" answered Diogenes. Alexander, it is said, admired the penetration and freedom of Diogenes; and after some conversation, he said to him, "I see, Diogenes, that you are in want of many things, and I shall be happy to serve you; ask of me what you will." "Retire, then, a little to one side," replied Diogenes; "you are depriving me of the sun." Alexander was astonished at seeing a man so much above every human concern. "Which of the two is richest," said Diogenes, "he who is content with his cloak and bag, or he for whom a whole kingdom does not suffice, and who is daily exposing himself to a thousand dangers in order to extend it?"[1]

[1] This story is from "Lives of the Ancient Philosophers," translated from the French of Fénelon by Rev. John Cormack, New York, 1846, p. 227.

The point of this story is not that Diogenes presents for us a satisfactory ideal of life. Diogenes and Alexander present two extreme ideals; but lofty ideals of success should be so firmly fixed in children's minds through conscious attention to the matter in the schools that when they go out into the world, and the sordid ideals of modern industrial success are interposed between them and the ideals that the school has presented, they will have the strength of mind and the independence of character to say, "Stand out of my sunlight!"

Another ideal that appeals particularly to boys is that of fame, and sometimes no careful distinction is drawn between fame and notoriety. The dangers in this direction are amply illustrated by the disposition of boys to idealize the military heroes of history, some of whom are only murderers on a large scale. With the attention devoted in most histories to these heroes it is not surprising that they exercise such a powerful influence over the minds of boys. This influence will be extremely harmful unless the aspiration for fame is restrained and corrected by a true conception of values with regard to the means of acquiring it.

Napoleon is a case in point. As a youth he reveled in Plutarch's "Lives of Illustrious Men"; Alexander and Cæsar became his heroes. "Who would not willingly be stabbed," said he, "if only he could have been Cæsar? One feeble ray of his glory would be an ample recompense for sudden death." He attained his am-

bition. He became the most famous man in the world. For that reason he oftentimes absorbs the interest of the ambitious boy. What a difference in the world's history it would have made if the interest of the boy Napoleon had somehow been aroused in, let us say, Galileo or Savonarola or St. Francis. Admitting the commendable qualities in the character of Napoleon, no teacher should be satisfied to leave a boy fashioning his life after him. Every schoolboy should read, until deeply imprinted on his memory, the musings of Robert G. Ingersoll at the tomb of Napoleon.

"A little while ago," he said, "I stood by the grave of the old Napoleon — a magnificent tomb of gilt and gold, fit almost for a deity dead — and gazed upon the sarcophagus of rare and nameless marble, where rest at last the ashes of that restless man. I leaned over the balustrade and thought about the career of the greatest soldier of the modern world.

"I saw him walking upon the banks of the Seine, contemplating suicide. I saw him at Toulon — I saw him putting down the mob in the streets of Paris — I saw him at the head of the army of Italy — I saw him crossing the bridge of Lodi with the tri-color in his hand[1] — I saw him in Egypt in the shadows of the pyramids — I saw him conquer the Alps and mingle the eagles of France with the eagles of the crags. I saw

[1] It was at Arcole that Napoleon caught up the standard and planted it upon the bridge.

him at Marengo — at Ulm and Austerlitz. I saw him in Russia, where the infantry of the snow and the cavalry of the wild blast scattered his legions like winter's withered leaves. I saw him at Leipsic in defeat and disaster — driven by a million bayonets back upon Paris, — clutched like a wild beast — banished to Elba. I saw him escape and retake an empire by the force of his genius. I saw him upon the frightful field of Waterloo, where Chance and Fate combined to wreck the fortunes of their former king. And I saw him at St. Helena, with his hands crossed behind him, gazing out upon the sad and solemn sea.

"I thought of the orphans and widows he had made — of the tears that had been shed for his glory, and of the only woman who had ever loved him, pushed from his heart by the cold hand of ambition. And I said, I would rather have been a French peasant and worn wooden shoes. I would rather have lived in a hut with a vine growing over the door, and the grapes growing purple in the amorous kisses of the autumn sun. I would rather have been that poor peasant, with my loving wife by my side, knitting as the day died out of the sky — with my children upon my knee and their arms about me — I would rather have been that man, and gone down to the tongueless silence of the dreamless dust, than to have been that imperial impersonation of force and murder, known as Napoleon the Great."

So said Colonel Ingersoll, and probably many others

would feel the same if they would but reflect that the career of Napoleon meant the sacrifice of two million, three hundred thousand men, the flower of France; that the entire number destroyed in the Napoleonic wars was seven million; that, whatever may be said of the genius of the great conqueror, which is undeniable, he was a cruel and selfish man. We may recognize the marvelous ability of Napoleon and the beneficial results that followed from his career, without losing sight of the fearful sacrifice involved. History is improperly taught if it leaves in the boy's imagination only pictures of the "glorious" moments in the life of Napoleon and dreams of unlimited power. His name should suggest the deadly clash of thousands of armed men, men who for the most part had no real grievance against each other, but were instigated by the military ambition of the man who was consciously emulating the career of his ideals, Cæsar and Alexander. With the contemplation of his example there should come to the imagination the rattle of musketry, the sound of cannon, the hiss and explosion of shells, mutilated bodies, livid corpses, and all the fearful sights and sounds that go to make up a battlefield. There should be some thought of desolated homes, of the agony of those who, with dim eyes and blanched cheeks, searched through the published lists of the killed and wounded, fearing to find the name of father or son, husband or brother; of the tears of parents and widows, and the cries of orphans. The

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"I thought of the orphans and widows he had made — of the tears that had been shed for his glory, and of the only woman who had ever loved him, pushed from his heart by the cold hand of ambition. And I said, I would rather have been a French peasant and worn wooden shoes. I would rather have lived in a hut with a vine growing over the door, and the grapes growing purple in the amorous kisses of the autumn sun. I would rather have been that poor peasant, with my loving wife by my side, knitting as the day died out of the sky — with my children upon my knee and their arms about me — I would rather have been that man, and gone down to the tongueless silence of the dreamless dust, than to have been that imperial impersonation of force and murder, known as Napoleon the Great."

So said Colonel Ingersoll, and probably many others

would feel the same if they would but reflect that the career of Napoleon meant the sacrifice of two million, three hundred thousand men, the flower of France; that the entire number destroyed in the Napoleonic wars was seven million; that, whatever may be said of the genius of the great conqueror, which is undeniable, he was a cruel and selfish man. We may recognize the marvelous ability of Napoleon and the beneficial results that followed from his career, without losing sight of the fearful sacrifice involved. History is improperly taught if it leaves in the boy's imagination only pictures of the "glorious" moments in the life of Napoleon and dreams of unlimited power. His name should suggest the deadly clash of thousands of armed men, men who for the most part had no real grievance against each other, but were instigated by the military ambition of the man who was consciously emulating the career of his ideals, Cæsar and Alexander. With the contemplation of his example there should come to the imagination the rattle of musketry, the sound of cannon, the hiss and explosion of shells, mutilated bodies, livid corpses, and all the fearful sights and sounds that go to make up a battlefield. There should be some thought of desolated homes, of the agony of those who, with dim eyes and blanched cheeks, searched through the published lists of the killed and wounded, fearing to find the name of father or son, husband or brother; of the tears of parents and widows, and the cries of orphans. The

boy who has been thus taught, who appreciates both the greatness of Napoleon and the unutterable woe and misery that followed in his wake, will not be likely to make him his hero and his beau ideal. He will rather be inclined to say that, after all, it would be better to be a poor man, earning one's bread in the sweat of one's face; to live in obscurity, and, dying, go down into everlasting oblivion, unsung by genius and unwept and unhonored save by those one loves, than to have been this most famous man in the world's history.

8. **Ideals of Service.** — Society can measure success only in terms of service. Wealth and fame are noble ambitions if duly subordinated to the ideal of service. The gospel of education, like that of religion, is service by love. The school, therefore, should exalt the lives of men and women who have best served the race. In times past the warrior might well serve as a conspicuous example. Without his courage and devotion the liberties and opportunities we prize might have been destroyed. But to-day the most valuable servant of society is likely to be found in the peaceful arts, in the exploitation of nature, in increasing production, in the battle with poverty, in the conquest of disease. It is here that the school should look for ideals to function in the task of educating the rising generation, the end being the development in the child's mind of the ambition expressed by George Eliot in a poem with which we may well conclude this chapter.

THE CHOIR INVISIBLE

O may I join the choir invisible
Of the immortal dead who live again
In minds made better by their presence; live
In pulses stirred to generosity,
In deeds of daring rectitude, in scorn
For miserable aims that end with self,
In thoughts sublime that pierce the night like stars,
And with their mild persistence urge man's search
To vaster issues.

So to live is heaven:
To make undying music in the world,
Breathing as beauteous order, that controls
With growing sway the growing life of man.
So we inherit that sweet purity
For which we struggled, failed, and agonized
With widening retrospect that bred despair.
Rebellious flesh that would not be subdued,
A vicious parent shaming still its child, —
Poor anxious penitence, — is quick dissolved;
Its discords, quenched by meeting harmonies,
Die in the large and charitable air;
And all our rarer, better, truer self,
That sobbed religiously in yearning song,
That watched to ease the burden of the world,
Laboriously tracing what must be,
And what may yet be better — saw within

A worthier image for the sanctuary,
And shaped it forth before the multitude
Divinely human, raising worship so
To higher reverence more mixed with love —
That better self shall live till human Time
Shall fold its eyelids, and the human sky
Be gathered like a scroll within the tomb
Unread forever.
This is life to come,
Which martyred men have made more glorious
For us who strive to follow. May I reach
That purest heaven; be to other souls
The cup of strength in some great agony,
Enkindle generous ardor; feed pure love;
Beget the smiles that have no cruelty —
Be the sweet presence of a good diffused,
And in diffusion ever more intense.
So shall I join the choir invisible
Whose music is the gladness of the world.

— GEORGE ELIOT.

CHAPTER X

THE FINISHED PRODUCT

Every sharply defined grade of human culture, such as that under which we now live, demands a system of education that shall embrace the whole being of man, his mental and natural sides, and all his varied affinities and relations, and shall therefore, as true to both man and child, educate the latter progressively and by development, in such a way as to produce and constantly maintain a sense of unity and completeness running through the whole of its life. — FROEBEL.

Education should be as broad as man. Whatever elements are in him, that should foster and demonstrate. If he be dexterous, his tuition should make it appear ; if he be capable of dividing men by the trenchant sword of his thought, education should unsheathe and sharpen it ; if he is one to cement society by his all-reconciling affinities, oh ! hasten their action ! If he is jovial, if he is mercurial, if he is great-hearted, a cunning artificer, a strong commander, a potent ally, ingenious, useful, elegant, witty, prophet, diviner, — society has need of all these. — EMERSON.

1. **Definition.** — We have now indicated the place of education among the arts, its essential nature, the fundamental force to which it must be applied, and the method and means by which the control of this force may best be effected. As yet, however, nothing has been said about the end of such control. We therefore turn our attention now to the product of education.

An art implies an artist, an ideal conception, the material means of its realization, and a finished product. This is obviously true of the "fine" arts, such, for in-

stance, as sculpture, painting, poetry, music, and architecture. It is equally true of all the other arts. In horticulture, for instance, the gardener is the artist, the flower or fruit he wishes to produce is the ideal conception, the plant, in its natural state with the conditions that surround it, is the material upon which he labors, and the fruit or flower that results from his efforts is the product. In education the teacher is the artist, a perfect human being the ideal, the child with its environment his raw material, and the child as it leaves his hands the finished product. What should be the character of this product?

Of course, what the artist strives for is complete conformity of product with ideal. This, however, is beyond his reach.

> "Whoever thinks a faultless piece to see,
> Thinks what ne'er was, nor is, nor e'er shall be."

No painter ever succeeded in producing a painting as beautiful as his dream; no sculptor, the statue of his imagination. In the consideration of the product of an art, then, we must take into account both the ideal product and the real product. First, then, what is the ideal product of education?

If, as it has frequently been defined, education is the process of adjusting the individual to his environment, we may best conceive the ideal to be aimed at by an analysis of the environment into its various phases, and a determination of the respective individual qual-

ities that perfect adjustment implies. As has already been suggested (see page 129), the environment presents eight well-defined phases. They are the physical, the intellectual, the industrial, the political, the social, the domestic, the esthetic, and the religious phase. Perfect adjustment to the physical phase of the environment implies health; to the intellectual, knowledge; to the industrial, productivity; to the political, public spirit; to the social, politeness; to the domestic, domesticity; to the esthetic, taste, and to the religious, righteousness. The ideal product of education, then, is healthy, intelligent, productive, public-spirited, polite, domestic, tasteful, and righteous. The actual product should approximate this many-sidedness of virtue and interest. If we represent the ideal product by a circle drawn within the inclusive environment, the actual product might be indicated by an inscribed octagon. (See page 170.)

If, then, by the title of this chapter, we should understand "the finished product" of education, we might say at once that there is no such thing, except in ideal. We mean, however, by finished product the product of common school education, the boy or the girl who, having finished the common school course, steps out into the broader experiences of practical life. What kind of boy or girl is it possible to produce?

Limiting ourselves, then, to the consideration of the finished product of the common school, we must first observe that, while there are such products, their

number is surprisingly small. Of the eighteen million children now enrolled in the schools of the United States, only twelve hundred thousand are in the secondary schools; and of these little more than a hundred thousand will be graduated. Some time ago it was reported that of twenty-five thousand children entering



the primary grades of Chicago only 28 per cent reached the grammar grade; only 15 per cent entered high school; and only 5 per cent were graduated. The figures are probably not greatly different now. Of a hundred children entering the second grade in the cities of America perhaps not more than three or four complete the course. In Boston the percentage is 4; in Chicago,

3; in St. Louis, 2. There is a steady falling away from start to finish. In the high schools of the country the percentage of enrollment of 1909–1910 in the first year was 42.09; in the second year 27.10; in the third 18.18; and in the fourth 12.63.

The inability of the common schools to hold the pupils until they have finished the course presents a serious educational question, which we shall not stop here to consider. A boy once amused himself, it is said, by building a mud man on the bank of a stream. Before his work was completed, he was called to dinner. During his absence some one came along and upset his mud man into the stream. When the boy returned, he looked for it in vain. A few days afterward his parents took him to a show. There he saw, among other curiosities, a peculiar-looking dwarf. The boy was greatly interested. So much so, indeed, that the dwarf finally turned upon him and asked, "What's the matter with you? Why are you following me about?" The little boy looked up at him reproachfully, and said, "Why did you run away before I got you finished?" This is a question that the teachers of the common schools might well ask themselves with respect to their own pupils.

When a pupil does remain, however, for the finishing touches, and is given a high school diploma, what sort of product should he be? The answer is: a boy or girl with such adjustment to the environment that the

virtues ascribed to the ideal product shall be developed in him or her to the highest degree possible in the school period. An enumeration, with brief comment, of the powers and virtues that a product of the common schools should possess is all that can be undertaken here.

2. **Health.** — In the first place, then, the finished product of the common schools should manifest a high degree of health. Certainly every child who is sent forth from the schools has a right to expect to go out into the world with health unimpaired by the work of the school. Health is the basis of achievement, and, to a certain degree, of happiness itself. The able man, as a rule, is the able-bodied man. There are exceptions, and physical vigor may have more to do with the quantity of achievement than with its quality; but health is of so much importance as almost to justify the remark, "With health, everything; without health, nothing." Health, then, should be the primary consideration of the school.

Now, recent investigations have proven conclusively that school work does sometimes injuriously affect the health. Investigations that have merely revealed a large number of school children who are physically defective are not the sort of investigations now in mind, although these are extremely significant. It is rather the kind of investigation made, for instance, in Cleveland some years ago, that bears especially

upon the question before us. There it was found that, of the boys entering school, 85 per cent were in good health. In the school period the percentage sank to 45, and rose to 70 after its close. Of the girls, 73 per cent were in good health on entering school. This percentage dropped to 17 in the school period, and later rose to 35. Seventy-five per cent of the girls in the high school were obliged to leave school, wholly or in part on account of ill health. The figures resulting from similar investigations elsewhere might be quoted, were it necessary to support the conclusion that the school does sometimes affect the health of the child injuriously. This is a serious reflection upon the school. What does learning amount to if the health is broken down? "What shall it profit a child if it gain the whole world of knowledge and lose its health, or what shall it give in exchange for its health?" A child would better have no schooling at all if it is to make him an invalid. Parents are foolish who seek to cultivate in their children a hothouse intellectual precocity at the expense of their physical vigor. The teacher is unwise who requires or permits a child to sacrifice its health in the acquirement of knowledge.

3. **The Use of the Fundamentals.** — The product of the common school should be so trained in the "fundamentals" of education, the three R's, the rudiments of learning, that the use of them shall have become second

nature. Reading, for instance, should be brought to the point at which it requires the expenditure of very little energy on the part of the higher nerve centers. The mind should be free to concentrate itself on the thought. There should be in the school much training in rapid reading. No one has really learned to read until he has learned the art of skipping. It is said of Gladstone that he read with extraordinary rapidity. He could glance through a book and extract from it what was of interest and value to him. Few books deserve to be read line by line.

To acquire the art of reading, as it is here contemplated, the child should read much. By the time the common school course is finished, he should be familiar with many of the great books of the world, and especially he should have had his imagination stimulated by the works of Scott, Dickens, Stevenson, and others whose books may be read by young people with interest, and with whom an acquaintance has come to be an element in the culture of mankind. Much reading may mean desultory reading, but this danger will be obviated by a skillful teacher. Children should be taught not only to read, but what to read and how to read. No books should be read but good books. There should be special preparation for the reading of a book, just as there should be special preparation for traveling in a foreign country. A book that is expected to instruct should be approached by questions that it is expected to answer;

and every really good book should be read more than once.

In writing, the object is legibility, always with due regard, of course, to rapidity and neatness. The purpose of writing is the transmission of thought, and writing should be so legible that the rays of thought may penetrate it as the rays of the sun pass through a transparent object. That system of writing is the best which enables the pupil to write legibly with the greatest ease. It may not be the same for different pupils. It is of no great consequence whether the perpendicular or slant method is used, providing the demands for ease, rapidity, and legibility are satisfied. Pupils sometimes imagine, boys particularly, that the writing of an illegible hand is not altogether blameworthy. They have been told or have read of the poor writing of certain great men. The writing of Horace Greeley, for instance, was often illegible to those who were not familiar with it. It is said that he once wrote a letter dismissing a man from his employ, and denouncing him in the severest terms. The man took the letter, showed it to another man as a recommendation, and secured a job on the strength of it! Rufus Choate said of the writing of Daniel Webster that when he wrote the word "would" it looked like a small gridiron struck by lightning. But, while it is true that talented men are sometimes poor penmen, erratic and illegible penmanship is no evidence of talent.

As to the science of numbers, practical life requires that the fundamental operations be almost automatically performed. The ability to add, subtract, multiply, and divide with facility and rapidity, both in integers and fractions, should, therefore, belong to every graduate of the common school. The multiplication table should be thoroughly memorized; if up to the number twenty, all the better. And, for the same reason, namely, the economy of time in the use of them, various arithmetical processes, after they are thoroughly understood, should be committed to memory. There is no short cut in arithmetic that the child should not be encouraged to use when he once understands it. Percentage, for instance, is not really learned until the child can use, with a thorough understanding, the best methods employed by expert accountants. Arithmetic is not merely for drill, but for use.

The power to use the instruments of knowledge is, then, a necessary object of the schools. But while considerable time and attention must necessarily be devoted to the development of this power, it should not be forgotten that it is not the sole aim of the school. It is a means, not an end. As some one has remarked, the three R's bear about the same relation to education as the knife, the fork, and the spoon bear to a good square meal. They are mere instruments, the skillful control of which is necessary to every product of the common school in the further education of himself. "Every

man, who rises above the common level," says Gibbons, the historian, "has received two educations: the first from his teacher; the second, more personal and important, from himself."

4. **The Desire for Knowledge.** — The only thing that will move the product of the school to a constant use of the instruments of learning in the promotion of his own education is a desire for knowledge and self-improvement. Unless this is awakened, the work of the school is practically in vain. The desire for knowledge is even more important than knowledge itself. "The important thing," says Sir John Lubbock,[1] "is not so much that every child should be taught, as that every child should be given the wish to learn. What does it matter if the pupil knows a little more or a little less? A boy who leaves school knowing much, but hating his lessons, will soon have forgotten almost all he ever learned; while another who has acquired a thirst for knowledge, even if he has learned little, will soon teach himself more than the first ever knew." An intense desire for knowledge is always a characteristic of the scholar. It was a desire for knowledge, and not the opportunity of a university education that made Herbert Spencer the greatest English-speaking philosopher; that prostrated Abraham Lincoln before a fire of hickory bark and clapboards to read Shakespeare, the *Pilgrim's Progress*, and the Bible; that lifted Hugh Miller from the stone

[1] "The Pleasures of Life," Chap. IX.

quarry to the highest eminence in geology; that made Elihu Burrit the learned blacksmith; that carried Garfield from the towpath to the White House. And it is the desire for knowledge, that, if developed in the mind of a child before it leaves the common school, will push it on to new acquisitions and attainments, and make its life a constant effort after self-improvement.

5. **Useful Knowledge.** — The best method of developing the desire for knowledge is to feed the mind with knowledge that is useful. The mere exercise of the intellectual faculties gives pleasure, but this pleasure may be experienced in acquiring knowledge that is useful as well as through mere intellectual gymnastics. The course of study of the common school should, therefore, consist in such studies as will bring the mind in contact with information that is likely to be most useful in the exigencies and affairs of life. Just what knowledge is of most worth is a difficult problem, but it ought to be easy to see that literature, when properly studied, is a better means of culture than the parsing of infinitives and participles; that the practical processes of mathematics should be emphasized more than the extracts of roots; that the history of one's country should take precedence over the history of the Jews; that the study of science is likely to prove to be of more value in life than a knowledge of Greek philosophy; that the ideas, activities, and habits of living men are as worthy an object of study as the former religious speculations and ceremo-

nials of the Egyptian dead. Men are of more consequence than mummies, and a dead language is not a worthier object of study merely because it is dead.

There is an idea more or less prevalent, even amongst those who ought to know better, that it does not matter what a child learns so long as he is learning; that discipline is the main thing. But discipline is none the less valuable if acquired while striving for useful knowledge. There should be, in the arrangement of the common school curriculum, the most careful discrimination as to the various studies with respect to their relation to possible use, and that which promises little utility should be carefully pruned out. This is true, not only with respect to the course pursued in the common schools, but also with respect to the courses of colleges and universities. The ideal of scholarship should be the possession of a vast amount of *useful* knowledge, not merely the exclusive possession of knowledge. A painstaking and laborious investigation of the trivial and commonplace may be scientific, but such an investigation deserves commendation all the more if it is directed with some thought of practical results. A German is said to have remarked in an after-dinner speech, after explaining that he was a professor of pure mathematics, that he thanked the Lord that he cultivated a science that had never been degraded to any practical purposes! This is probably an extravagance, but it does illustrate the disposition of some to divorce knowledge from utility.

We would not be misunderstood in what has just been said. Certain studies in the common schools, and certain investigations in colleges and universities, that may, at first sight, seem to promise little practical usefulness, may turn out to be of the highest consequence. Says Pearson: "It is impossible to say of any result of pure science that it will not some day be the starting point of wide-reaching technical applications. The frogs' legs of Galvani and the Atlantic cable seem wide enough apart, but the former was the starting point of the series of investigations that ended in the latter. The recent discovery of Hertz that the action of electromagnetism is propagated in waves like light — his confirmation of Maxwell's theory that light is only a special phase of electromagnetic action — seems at first to have no practical application, but it has led to wireless telegraphy." [1] "Every particular class of inquirers," says Spencer, "has, as it were, secreted its own particular order of truths from the general mass of material which observation accumulates; and all other classes of inquirers have made use of these truths as fast as they were elaborated, with the effect of enabling them the better to elaborate each its own order of truths. It was thus with the application of Huyghens's optical discovery to astronomical observation by Galileo. It was thus with the application of the isochronism of the pendulum to the making of instruments for measuring

[1] Pearson, "Grammar of Science," pp. 29–30.

intervals, astronomical and other. It was thus when the discovery that the refraction and dispersion of light did not follow the same law of variation affected both astronomy and physiology by giving us achromatic telescopes and microscopes. It was thus when Bradley's discovery of the aberration of light enabled him to make the first step toward ascertaining the motions of the stars. It was thus when Cavendish's torsion-balance experiment determined the specific gravities of the sun and the planets. It was thus when tables of atmospheric refraction enabled observers to write down the real places of the heavenly bodies instead of their apparent places. It was thus when the discovery of the different expansibilities of metals by heat gave us the means of correcting our chronometrical measurements of astronomical periods. It was thus when the lines of the prismatic spectrum were used to distinguish the heavenly bodies which are of like nature with the sun from those which are not. It was thus when, as recently, an electro-telegraphic instrument was invented for the more accurate registration of meridional transits. It was thus when the difference in the rates of a clock at the equator, and nearer the poles, gave data for calculating the oblateness of the earth, and accounting for the precession of the equinoxes."[1] All this is true enough. But the fact that the discoveries of science, pursued without regard to practical use, have been applied in unexpected

[1] Spencer, "The Genesis of Science." Humboldt Edition, p. 14.

directions is no sufficient reason why even scientific investigation should be undertaken without some consideration of probable utility. Such unforeseen applications merely show that knowledge of any kind may prove to be useful, — a fact that no one denies.

And so, with respect to the school curriculum, it should be constructed with the conscious design of supplying the probable intellectual and practical needs of the pupil; and the product of the common school should have stored in his mind a large amount of useful information.

6. The Power to Think. — Information, however, is of little value unless accompanied by the power to think. Thought is necessary to transmute knowledge into wisdom. A man may be a walking encyclopedia and still be a fool, a —

> "bookful blockhead, ignorantly read,
> With loads of learned lumber in his head."

Thinking, however, is a difficult process. It requires the expenditure of much energy. "What is the hardest task in the world?" inquires Emerson, and he answers, "To think." It is so difficult that few people seem willing to undertake it. Not one person in a hundred ever sits down to think deeply and connectedly, without being forced to do so by circumstances. And when thus compelled, the effort, from want of previous practice, is likely to result in little more than mental worry and confusion.

Thinking is accompanied also by dangers. A new thought let fall in the world oftentimes produces as much commotion as an explosion of dynamite or the convulsion of the earth's crust. "Beware," says Emerson, "when the great God lets loose a thinker on this planet. Then all things are at risk. It is as when a conflagration has broken out in a great city, and no man knows what is safe, or where it will end. There is not a piece of science but its flank may be turned tomorrow; there is not any literary reputation, not the so-called eternal names of fame, that may not be revised and condemned. The very hopes of man, the thoughts of his heart, the religion of nations, the manners and morals of mankind, are all at the mercy of a new generalization." [1] The patriots of Concord —

"Fired the shot heard round the world";

the thoughts of the man who wrote that line will reverberate throughout the world forever.

But thought invades the intellectual peace and complacency of men. When it does so the thinker is unwelcome. He is made to suffer, as are other disturbers of the peace. A Tolstoi is patronized or ridiculed; a Darwin, excoriated; a Galileo, humiliated and compelled to recant; a Socrates, poisoned, and a Saviour crucified. Hence few have dared to think. "In the whole period from the sixth to the tenth

[1] Emerson, "Complete Works," Concord Edition, Vol. II, pp. 308–309.

centuries," says Buckle, "there were not in all Europe more than three or four men who dared to think for themselves." Persecution to-day is not so effective, but the proportion of thinkers is small. Men slay (or flay) the prophets. This is not because there is hostility to truth as such any more than there is to error; it is because truth is the light in which the weakness, folly, and wickedness of men are exposed, and they resent exposure.

Thought is, also, in a very real sense, dangerous to the thinker himself. It makes his certainties uncertain. He finds himself adrift when he had supposed he was anchored. He begins to doubt cherished dogmas, and doubt is supposed by many to be a sin. It would be truer, however, to attach the idea of a state of sin to intellectual contentment and quiescence. Without doubt there is no thought. Doubt is the dynamic of thought. It is to thought what steam is to the engine.

"You tell me, doubt is Devil-born.

I know not: one indeed I knew
In many a subtle question versed,
Who touch'd a jarring lyre at first,
But ever strove to make it true:

Perplext in faith, but pure in deeds,
At last he beat his music out.
There lives more faith in honest doubt,
Believe me, than in half the creeds.

He fought his doubts and gather'd strength,
He would not make his judgment blind,
He faced the spectres of the mind
And laid them: thus he came at length
To find a stronger faith his own."

The road to an abiding and quickening faith passes through the valley of doubt.

"Perhaps the deeper faith that is to come
Will see God rather in the strenuous doubt
Than in the creed held as an infant's hand
Holds purposeless whatso is placed therein."

"It can scarcely be questioned that when the truth or falsehood of an event or observation may have important bearings on conduct, over-doubt is more socially valuable than over-credulity. In an age like our own, which is essentially an age of scientific inquiry, the prevalence of doubt and criticism ought not to be regarded with despair or as a sign of decadence. It is one of the safeguards of progress . . . honest doubt is far healthier for the community, is more social, than unthinking inference, light-hearted and over-ready belief. Doubt is at least the first stage toward scientific inquiry; and it is better by far to have reached that stage than to have made no intellectual progress whatever."[1]

But no matter how dangerous thinking may be, individually or socially, it is necessary. Upon it depends individual and social salvation. It is the only possible method of arriving at the truth, and the truth alone

[1] Karl Pearson, "The Grammar of Science," pp. 66–69.

can make us free. What the world needs to-day, as much as anything else, if not more, is that people think for themselves. There are too many who take their politics and religion from their ancestors, who act by rule of thumb, whose conversation is an echo of the pulpit, the press, or the last book they have read. They believe what they see in print, and to them the library is the only source of knowledge. "Meek young men," says Emerson, "grow up in libraries, believing it their duty to accept the views which Cicero, which Locke, which Bacon, have given; forgetting that Cicero, Locke, and Bacon were only young men in libraries when they wrote these books." [1]

The power to think, then, should be consciously encouraged in the schools. If it is not, it is not likely to be developed elsewhere, except by the force of circumstances. Every lesson that is given should be consciously a thought lesson, and every effort to think should be rewarded by approval. There is a story to the effect that a child was asked by his teacher what he was doing. The child replied that he was thinking. "Stop it," said the teacher; "this is no place to think!"

Teachers and parents should be careful not to discourage in the children the habit of thinking. Children are sometimes reproved or rebuked by their elders for absent-mindedness. All thinkers are necessarily absent-minded with respect to matters other than those upon

[1] Emerson's "Complete Works," Concord Edition, Vol. I, p. 89.

which their thought is concentrated. It has been said of Gladstone that in some respects he did not seem to be a great man, but in the power to concentrate his mind upon the subject in hand to the exclusion of all others he was the greatest man in the British Empire. We laugh when we read that in the attempt to time the boiling of an egg, Watt put his watch in the water and held the egg in his hand; or when we are told that Sir Isaac Newton sat by the fire until he burned his shins, and then reproved his valet for not removing the fire! It is said of Sir Walter Scott that, being fond of pets, he wished to allow his cat to come into his study. So he cut a hole in the door to give it entrance. Then it occurred to him that the kittens should have the same privilege, so he cut a little hole by the side of the big hole to allow the kittens to come in. Similar stories are told of other great men. Socrates is said to have stood in one place for twenty-four hours thinking of a philosophical problem, while a battle was going on. It has been irreverently suggested that he was so badly scared that he was unable to run. It is said also of Descartes that he walked into the midst of a hostile army while he was absorbed in thought. There is a well-known story that Archimedes solved a problem while in his bath, and jumping out ran down the street crying "Eureka! Eureka!" altogether forgetting the proprieties of the occasion. When Syracuse was besieged and in flames, soldiers rushed into the house of Archimedes and found

him deeply absorbed in a mathematical problem. All unconscious of danger, he cried out, "Don't disturb my circles," and fell, pierced by the sword of a soldier. Hegel, the great German philosopher, finished his profoundest book, *The Phenomenology of Spirit*, while the battle of Jena raged around him. Similar stories are told of other absent-minded philosophers.

It must not be supposed, however, because philosophers are absent-minded, that absent-mindedness in children should evoke rebuke and ridicule. There can be no hard thinking without more or less abstraction. Training children to think is not necessarily encouraging them to be visionary and impractical. Quite the contrary. The ability to think is a necessary equipment for life. Thinking, as has been shown, is the secret of the memory and also of the will. How often does one say after doing wrong or making a mistake, "I didn't think"! Let the child be so trained to think that when it is tempted to do wrong, it will stop and reflect that to yield means to become a liar, a hypocrite, or a thief. Let him be so trained that when he is confronted, as he will be in later life, by scientific and antiscientific theories and dogmas he will have the power and the disposition to examine them critically before accepting them or rejecting them.

By the time the pupil has finished the work of the common schools, he should have acquired the scientific attitude and habit of mind, and should have developed,

to the fullest extent possible in the school period, the power to think.

7. The Power of Expression. — Thought is of no social value until it is expressed. Along with the development of the power to think there should also be developed both the power and the inclination to express thought. Scott says of one of his characters in "St. Ronan's Well" that "He forgot amid the luxury of deep and dark investigations, that society has its claims; and that the knowledge that is unimparted is necessarily a barren talent, and is lost to society, like the miser's concealed hoard by the death of its proprietor."

But it is not because the thought of the average person is likely to be of great value to society that the power to express it is a desirable possession. Training in the art of expression should receive attention because expression is so large a part of life. All the arts of expression cannot find a place in the common schools. But there is one to which it should give constant attention, and that is the art of expressing thought in the mother tongue. Every hour in the day men and women in ordinary life are called upon to use their native language. They should be taught in the schools to use it artistically. It is sometimes said that if a child only knows a thing he can tell it,[1] and the implication is that attention need

[1] This opinion has the sanction of high authority. Montaigne says: "Let but our pupil be well furnished with things, words will follow too fast; he will pull them after him, if they do not come voluntarily. . . .

be given only to the inculcation or development of ideas; but this is a mistake. It may be true that if a child knows a thing he can tell it; but the question is; can he tell it artistically? that is, in clear and concise language without unnecessary verbiage? What a wonderful art it is! How skillfully it is employed by the orator and the poet! Often in reading a book we say, "That is exactly what I think, only I could not express it in that way."[1] As Pope said: —

> "True Wit is nature to advantage dress'd,
> What oft was thought, but ne'er so well express'd."

How many in the endeavor to express their thoughts are

For my part I hold, and Socrates is positive in it, that whoever has in his mind a vivid and clear idea, will express it well enough in one way or other; and if he be dumb, by signs.

> 'When once a thing conceiv'd is in the wit,
> Words soon present themselves to utter it.' "

It is probably true that a vivid and clear idea will find expression "in one way or other." But expression is an art. Consequently the aim should be artistic expression. The teacher ought not to be satisfied with "one way or other." There is a best form of expression, and that should be the constant aim. Conjugal love, for instance, has been expressed by millions of men; but how feeble is the ordinary expression in comparison with that of Shakespeare, as he puts it into the mouth of Brutus —

> "You are my true and honorable wife;
> As dear to me as are the ruddy drops
> That visit my sad heart."

[1] "Usually it seems to the recipient of a truly artistic impression," says Tolstoi, "that he knew the thing before, but had been unable to express it." — *What is Art*, p. 102.

obliged to resort to slang, sometimes to profanity! The use of slang and profanity is a confession of poverty of language, the inability to express one's self in appropriate words. Boys, when led to see that this is true, will be restrained from profanity, not only because it is vulgar and wicked, but also because it is an acknowledgment of lack of power. Most boys, and men, too, would rather be thought wicked than weak.

The importance, then, of developing in the schools the power to express thought in beautiful and appropriate language can hardly be overestimated. Every recitation should be a lesson in expression. There should be frequent exercises requiring written composition. No slipshod forms or methods of expression should be tolerated in writing or in speech. If sufficient attention is given to the matter, the product of even the common school will be able to express himself clearly in the mother tongue.

8. Power and Inclination to Work. — Another quality that the product of the common schools should manifest is the proper attitude toward productive labor, and some ability to perform it. The separation of the whole school life from the thought of work and the opportunity to engage in it has long been one of the most serious defects of American education. If we were entirely successful in keeping children in school until they finish the course, they would by that time, in all probability, as the schools are now conducted, be not only without skill

in labor, but without the disposition to enter upon it. The movement now in progress toward the introduction of vocational training is doing something toward correcting this fundamental school defect; but to put the common schools on the proper basis with respect to labor will require nothing less than an educational revolution.

The fact is that the aristocratic idea with respect to work still has wide prevalence. It is still almost generally supposed that it is more dignified and honorable to live without labor, or to practice some exploiting occupation, than it is to earn a living by productive labor. The contrary is, of course, the case. The only dignified and honorable life is that of those who respond to the requirements of both nature and society and produce by labor the goods that they consume, or render adequate service to society in return for such goods.

Life in any complete sense is impossible without work. Idleness depresses the mind and leads to *ennui*, which is painful. Men who think it is a disgrace to work try to relieve themselves of the discomforts of indolence by indulging in sports and games, and thus secure the bodily activity necessary to physical health. But work is better than sports and games to tone up the body and mind. Even those whose lives are chiefly employed in intellectual work should devote some part of the day to labor that involves muscular exercise. Ruskin and Tolstoi were right in insisting that every

man should engage for a part of each day in some form of manual labor. "There is virtue yet," says Emerson, "in the hoe and the spade, for learned as well as unlearned hands." Such work tends to keep one in health. It is mentally and morally invigorating.

Labor, then, is essential to life. No one can attain his highest development without it. This of itself would be a sufficient reason why the schools should inculcate a respect for labor, and aim at the development of productive skill. There is another reason quite as strong. Society must have means of sustenance and means of culture. These can be supplied only by labor. He who does not live by his own labor must live by the labor of somebody else. To live by the labor of others is to be a parasite. Self-respect, then, and the happiness that comes from the consciousness of the good will of others, are only possible, in the highest sense, to those who are performing their share of the necessary work of the world. And no part of such work is undignified or ignoble.

The school, then, should not be merely a place to study, but also a place to work. Learning and labor should go hand in hand. No school is properly equipped for education in a democratic community without a garden and a shop. In the garden and the shop pupils should acquire some knowledge of and skill in productive labor. Their intellectual tasks should, to a large extent, grow out of and center about their labor and the labor

that has been exerted in the life of the race. Especially should the school inculcate upon the minds of children correct ideas with respect to the relation of labor to the happiness of mankind. It is a reflection upon the schools if those who come forth from them entertain the idea that any form of labor necessary to the well-being of man is ignoble or disgraceful, or if they are disposed to look down upon those who spend their lives in productive toil. The school should inculcate respect for labor and an interest in it, to the end that the graduate of the common schools may entertain correct ideas with regard to labor and may have developed the disposition to earn his living by some form of useful work.

9. **Public Spirit.** — It is generally recognized that it is a proper function of the common schools to inculcate the virtue of patriotism. Patriotism is usually defined as a love of country. With most pupils it is associated with the flag, and the army and navy. But when properly understood, patriotism is only an extension to the nation of the feeling of interest in the welfare of home, family, and community which a good man and citizen should manifest. One may not be truly a patriot and yet be indifferent to the well-being of the city or village in which one lives. Patriotism, like charity, should begin at home. As it is ordinarily inculcated in the schools, it begins with the nation, and apparently ends there. Otherwise could there be so little public interest in matters pertaining to local affairs? The population

of our country is nationally patriotic, but the spirit of community and civic patriotism is comparatively rare. Patriotism and public spirit are one. The true patriot is interested in all that is necessary to the well-being of the community, town, or city in which he lives, as well as in matters pertaining to the national government.

Public spirit, then, instead of patriotism as ordinarily understood, should be the object of the school. The relations that must necessarily exist between private action and public welfare should be clearly shown, and the pupils should be led to resent, as they would a personal injury, any action that injures the public and prevents the progress and well-being of the community in which they live.

10. **The Social Graces.** — Inasmuch as no man liveth unto himself, the child should be systematically taught, as early as possible, how to deport himself in the presence of others. The sooner he learns the ordinary social graces and amenities, the sooner these become second nature to him, the easier will be his course through life, and the more probable his success. "Manners make the man."

The established etiquette of society is not a system of arbitrary conventions that may with equal convenience be observed or disregarded. It includes such forms of behavior as have been found to be necessary to the proper conduct of social life. "Etiquette, with all its littlenesses and niceties," it has been said, "is founded upon a central idea of right and wrong."

Now the school, by its very nature, offers an excellent opportunity for the cultivation of the social graces. Children of all classes and conditions are brought there into intimate social relations. The school is, socially, society in miniature. What better opportunity could be desired to teach the usages and proprieties of social life?

And what could be more practical than to teach children the recognized usages and customs of social occasions? It is the want of such knowledge that leads to much embarrassment and shame. Of how much pain and discomfort in after life a boy would be relieved if he were taught in the schools how to enter a room, how to leave it, and the proper forms of an introduction! His love-making will perhaps have to be left to take care of itself, but even here he could be saved a great deal of an intense sort of mental discomfort if the formalities even of that were learned before he loses his head.

Again, what could be more profitable to pupils in the rural districts, all of whom, perhaps, will afterwards visit the city, than to be given some instructions in school with regard to the social customs and practices of city life? Why should they be left to find out these things by painful experience? To be a greenhorn in the city affords amusement for others, but it is anything but satisfactory to the one chiefly concerned.

In many ways, with a little conscious attention, social friction could be diminished, and the path of life be smoothed, by an endeavor on the part of the school to

prepare a product of which, socially speaking, the rough corners are knocked off and which would be, to a certain extent, polished.

11. **Family Duties.** — In the ordinary course of affairs, the boy who comes forth from the common school will be a husband, a father, and the head of a family; the girl, a wife, a mother, and a housekeeper. Is there any reason why, in the effort to educate boys and girls, the duties consequent upon the future family life should be entirely neglected? Great emphasis is now laid, none too much, upon vocational training. But here are vocations upon which practically all will enter. Sometimes it is difficult to determine what a child is industrially to become; and consequently the kind of industrial training that he especially needs. But domestic science, the household arts, and household economy are subjects which will be of practical benefit to all. "Consider the fact from any but the conventional point of view," says Spencer, "and it will seem strange that, while the raising of first-rate bullocks is an occupation on which men of education willingly bestow much time, inquiry, and thought, the bringing up of fine human beings is an occupation tacitly voted unworthy of their attention. Mammas who have been taught little but languages, music, and accomplishments, aided by nurses full of antiquated prejudices, are held competent regulators of the food, clothing, and exercise of children. Meanwhile the fathers read books and periodicals, attend

agricultural meetings, try experiments, and engage in discussions, all with the view of discovering how to fatten prize pigs! Infinite pains will be taken to produce a racer that shall win the Derby, none to produce a modern athlete. Had Gulliver narrated of the Laputans that the men vied with each other in learning how best to rear the offspring of other creatures, and were careless of learning how best to rear their own offspring, he would have paralleled any of the other absurdities he ascribes to them." [1]

Of course, the more delicate questions implied by domestic life can never become matters of school instruction. But the sciences and arts pertaining immediately to home life may well be taught. The penalty that society pays for ignorance in regard to the nourishment and care of children is an enormous death rate of the very young. Some instruction in this direction might well be given to both boys and girls — boys as well as girls, for if there are sound reasons for teaching boys how to raise hogs and cattle, there are even stronger reasons why they should be led to devote some attention to the care and culture of children.

The chief aim of the schools with respect to the family life should be to attach the mind of both boys and girls to the duties and simple joys of the home life — that is, to making them intelligently domestic.

[1] "Education: Intellectual, Moral, and Physical," Humboldt Edition, p. 305.

12. Love of the Beautiful. — No person is really educated who has not developed the power to appreciate the beautiful in nature, who does not admire the beauty of a sunrise or sunset, who is not affected by the sublimity of a storm, the grandeur of the woods and mountains, who does not feel his heart leap up when he beholds a rainbow in the sky. The world is full of beauty to those who have eyes to see. No better service can be rendered a child than to open his eyes to beautiful scenes and his ears to the harmony of music. What an inexhaustible source of pleasure are the sights and sounds of nature to him who has the power to appreciate them! The contemplation of a rainbow, a sunset, a flower, a tree, a landscape may lift his soul above the sordid affairs of life and strengthen him for its arduous duties.

What has just been said with regard to nature applies also to art. There should be a most careful attention to the development of an interest in painting, poetry, sculpture, and music. It may not be possible to develop skill in all these arts. The common school has no time for that, but by a little attention it may develop an appreciation of art which will add wonderfully to the enjoyment of life. The appreciation of the beautiful should be a common possession. It should be the solace of our leisure hours.

The general development of an esthetic interest would go far to solve some of our most difficult social and in-

dustrial questions; the labor problem, for instance. This problem in one of its aspects is a problem of leisure. Sometimes it is argued that the laborer must not be given a half holiday, must not have shorter hours of work, because he will waste his time, means, and energy in the various forms of dissipation; he would better be at work. This is more or less of a reflection upon the schools, which must assume their share of the responsibility for the failure to develop in the laboring class a wider range of interests. If our laboring classes were properly educated, I mean that if in their schooling proper attention were given to the development of an interest in nature and in art, they would take advantage of any leisure they might obtain to find innocent sources of enjoyment in museums, in libraries, in the fields, and in the woods.

A love of the beautiful, then, is a proper object of school education, and no pupil should leave the common schools without it.

13. **Righteousness.** — Finally, and briefly, the religious element in the nature of man should receive proper recognition in the schools. Not that the schools should be employed to promote the interests of any sect. Religion is nonsectarian. Religion is the desire to be in right relations with the great Power manifesting itself in the universe. This desire leads to right conduct. Right conduct, that is, righteousness on the part of the individual, is essential to the well-being and

life of society. "Righteousness exalteth a nation." Society, therefore, which establishes the school, should insist that some conscious attempt should be made to make the products of the common schools boys and girls disposed to be righteous.

14. Conclusion. — If the reader will now glance backward over this rather long discussion of the finished product of the public schools, he will see that the qualities which it is insisted that such a product should manifest are all included in the following: health, intelligence, industry, public spirit, politeness, domesticity, taste, and righteousness. All these are necessary to an all-round development. They represent the "many-sided interest" of the Herbartians. They are the necessary results of the adjustment of the child to the various phases of his environment. All that has been insisted upon here is that the common school should carry this process of adjustment as far as is possible in the school period. With these various qualities at least initiated, and with the self-confidence to which their possession should naturally give rise, the process of education will be continued by the pupil himself, and if so, he cannot fail to be a useful citizen, nor can the school fail to be justified by its work.

CHAPTER XI

THE ULTIMATE END OF EDUCATION

The great object of Education should be commensurate with the object of life.— EMERSON.

No school can avoid taking for the ultimate moral aim a desirable state of feeling called by whatever name — gratification, enjoyment, happiness. — SPENCER.

1. The End of Life.— The end of life is happiness. This has been denied, and much subtle reasoning has been employed to prove that virtue, or holiness, or perfection, or self-realization, or something besides happiness is the ultimate end of our existence. But why should we be virtuous or holy, or strive for perfection or self-realization, if these ends do not contribute to the sum of agreeable states of feeling embraced in the word "happiness"? Some speak of the sweet uses of adversity, the discipline of sorrow, and the moral benefits of suffering, as if human beings were put into the world not to enjoy, but to suffer, not to be glad, but to be sad. There is indeed a great deal of pain in the world, and no doubt it has its purpose. Undoubtedly both man and his environment are imperfect, and double imperfection brings much pain and misery. But pain is always and everywhere an evidence of maladjustment. Where pain is, something is wrong. In the ideal society, of which poets

sing and prophets dream, there is to be nothing but joy and gladness. "God shall wipe away all tears, and there shall be no more death, neither sorrow nor crying, neither shall there be any more pain"; for all these things shall have passed away. Paradoxical as it may seem, the function of pain is to promote happiness.

2. **The Will to Live.** — Happiness may be defined as a result or a concomitant of the due and proper exercise and appreciation of all the faculties and powers of the individual. That is to say, it may be identified with life itself, in the broadest acceptation of that term. The desire for happiness is the will to live.

All sentient beings crave life, the human being perhaps most of all. Man may want but little here below, but it is evident that he wants to live. He struggles, he sacrifices to preserve his life; he puts forth almost superhuman efforts to prolong it when sometimes to an onlooker it seems to be of little worth. We question the sincerity of those who say that they are "tired of life." It is the limitations imposed by unfavorable conditions that are irksome. These drive to despair and to suicide. But life itself is sweet. "All my possessions," said the dying Elizabeth of England, "for a moment of time." Life is the highest good. The will to live is the mainspring of progress.

3. **The Time Element in Life.** — Life implies both a quantitative and a qualitative element. The quantitative element is time, mere length of days. Time is the

measure of opportunity. We habitually underestimate its value. Lowell, in one of his best poems, seems to assert that a critical moment comes to every man and nation, and that it comes but once. But rightly perceived every moment is critical. It gives opportunity for choice, and eternity, as Balzac remarks, hangs on the slightest of our decisions. "Choose well," says Goethe; "your choice is brief and yet endless." Every hour of life, then, like a jewel dropped from the hand of the Almighty into the lap of Time, is studded with diamonds of opportunity.

If this fact were truly appreciated, we should regard the loss of time as, what it really is, a loss of life, and employ all available means of adding an increment, however slight, to the average longevity. Time lost is indeed irrevocable. Not even the arm of Omnipotence is powerful enough to turn back the hands on the clock of Time. "This passing moment is an edifice which the Omnipotent cannot rebuild." The fleeting hours may be likened to a procession of ships, which, having weighed anchor and turned their prows seaward, sail in endless line over the wide ocean. Moored by the shore is the present hour, but it too will soon have slipped its cable, and, whether laden with generous thoughts and noble deeds, or the débris and ashes of frivolity and vice, will, like the others, go drifting out over the bosom of the boundless sea of Time, where "no eye has ever detected the gleam of a returning sail." Was not Dryden correct when he wrote, "This hour's the very crisis of your fate"?

If such supreme importance really attaches to the present hour, what shall we say of life viewed merely as a succession of hours? It is the only life of which we can be absolutely sure. We may hold with Plato to the doctrine of metempsychosis or the transmigration of souls, or with the Theosophist to the doctrine of preëxistence and incarnation, and say with Wordsworth, that

> "Our birth is but a sleep and a forgetting:
> The soul that rises with us, our life's Star,
> Hath had elsewhere its setting,
> And cometh from afar,"

but the basis of all such beliefs is as yet only the intimations that present themselves to the poetic mind. We may, indeed, cherish the hope of a future immortality, and anchor upon it as the foundation of our faith, but the old, old question will recur, "If a man die, shall he live again?" There is truth in that view of life expressed by the great Agnostic: "Life is a narrow vale between the cold and barren peaks of two eternities. We strive in vain to look beyond the heights. We cry aloud, and the only answer is the echo of our wailing cry. From the voiceless lips of the unreplying dead there comes no word." And though we rejoice that "in the night of death Hope sees a star, and listening Love hears the rustle of a wing," we hesitate to say, "I know"; we only "hope" and "believe." "Knowledge is of things we see."

But even if a life beyond the grave were a demon-

strated fact, it would not take away any of the importance or value of the present life. It would still be true that the most important period in human existence is the life that now is. Education should therefore exalt this life, and be directed to such care of the body and such habits of life as will increase the average longevity. Length of days is an element in the ultimate end of education.

4. **The Qualitative Element.** — But "How to live? — that," as Spencer declares, "is the essential question for us. Not how to live in the mere material sense only, but in the widest sense. The general problem which comprehends every special problem is — the right ruling of conduct in all directions under all circumstances. In what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to behave as a citizen; in what way to utilize all those sources of happiness which nature supplies, — how to use all our faculties to the greatest advantage of ourselves and others, — how to live completely? And this being the great thing needful for us to learn, is by consequence the great thing which education has to teach. To prepare us for complete living is the function education has to discharge."

Complete living we have accepted as the ultimate educational aim, since it is equivalent to happiness. But what is it "to live completely"? We can answer this question only by analyzing the conditions of happiness.

We have seen that a long life is one of them, since it affects the totality of happiness. But obviously there are many more. "To live," said Rousseau, "is not merely to breathe, it is to act. It is to make use of our organs, of our senses, of our faculties, of all the powers which bear witness to us of our existence. He who has lived most is not he who has numbered the most years, but he who has been truly conscious of what life is." What, then, in addition to length of days, are the factors essential to complete living or happiness? They will include at least the following — health, work, leisure, appreciation of the beautiful, wealth, friendship, love, and the peace of mind that comes from the possession of a conscience void of offense.

The necessity of health as a condition of happiness must be obvious to all. No one can be really happy when he is sick. The influence of the health upon the general condition is well illustrated in the case of the dyspeptic. "Ill" is a word that is applied both to a bodily and a mental condition. The first condition to happiness is health and vigor. This implies the satisfaction of all the reasonable physical wants.

The second condition is work. By work I do not mean drudgery, but the doing of what one likes to do, with a definite and useful purpose. That is work, and it is also "art." The pleasure of the artist is impossible without work, and without it the full measure of happiness can never be attained.

Work, then, is essential to life, but work is often carried to excess. With the laboring man it usually is. The interests of life are not all industrial. There are intellectual, artistic, social, and other interests. If these are to enter into life, there must be some freedom from toil. Leisure is as essential to life as work. Without leisure man is a slave. Continuous toil means existence, not life. Without some freedom, some spare time, a man is likely to be a stranger to literature, music, science, and art. When these are lacking, life is empty. Hence true living demands a shortening of the labor day, so that men may avail themselves of all the sources of enjoyment and happiness.

Leisure, however, is only opportunity. If spent in idleness and dissipation, it degrades instead of ennobling. It is a blessing only to those who know how to use it. Now the use of leisure depends on education. All men, therefore, should be educated so that they can use their leisure to promote their lives. There should be developed in them a love of nature, the power to appreciate and enjoy music and art, and a taste for good literature. With these the laborer has inexhaustible sources of happiness. His leisure is transmuted into strength. He is no longer a mere laborer; he is a Man. And so the artist, as Emerson says, "when he has exhausted his materials, when the fancy no longer paints, when thoughts are no longer apprehended, and books are a weariness, — has always the resource *to live*."

The spirit of the artist and artistic labor necessarily involve a love of the beautiful. Such love is a perpetual source of pleasure. Its gratification is, to a considerable extent, free to all. We cannot open our eyes upon field or forest or sky without having them flooded by beauty. Not to be able to appreciate it is certainly to fall far short of the possibilities of happiness. A love of the beautiful, with highly developed power of appreciation, is therefore necessary to the maximum of happiness.

But neither the complete enjoyment of the esthetic sense, profitable leisure, effective work, nor health itself is possible without the material means of existence, that is, wealth. Wants without wealth means misery. Wealth is necessary to the satisfaction of our legitimate physical wants. Love of the beautiful demands wealth to bring us into contact with the beautiful. What a blessing it would be if all could share the knowledge of science, the beauty of the mountains and the sea, the delights of travel, the inspiration of historic places, and the glories of art as revealed in the great museums of the world! This would be possible if all had wealth and leisure. Both, then, are indispensable elements in our conception of life.

As to friendship, love, and a clear conscience, they are so obviously necessary to happiness that they need only be mentioned to complete the analysis.

To live completely, then, is to live long, to enjoy

good health, to spend a portion of one's time in useful and healthful toil, to have a share of leisure for mental improvement and the enjoyment of the beauty of nature and art, to have a cultivated mind and the material means to gratify all legitimate wants, to have the companionship and sympathy of those we love, and a mind conscious of the right. These are the elements of complete living, the conditions of happiness, and they are all involved in the ultimate end of education.

What an art, then, is education, which aims at the realization of life — fullness of life for each and for all. In its vital or individual aspect it seeks to create a perfect human type with all the powers and possibilities of perfection. Socially it looks to the realization of an ideal humanity in which alone individual perfection is possible. The individual products are the material out of which is to be fashioned an ideal humanity, the Social Temple, a house not built with hands, whose foundations are laid in liberty and justice, whose altars are aflame with the sacred fire of love, and within whose walls the children of the future, surrounded by more congenial influences than perhaps we are as yet able to conceive, may develop the utmost possibilities of their being.

The teacher, therefore, is both sculptor and architect, both mason and builder. Although aiming directly at the improvement of the individual type, he is indirectly engaged in the world-old task of building a better world.

CHAPTER XII

THE ARTIST TEACHER

And gladly wolde he lerne, and gladly teche. — CHAUCER.

As we become better teachers we also become in some sort better persons. Our beautiful art, being so largely personal, will at last be seen to connect itself with many other employments. — PALMER.

"Kunst macht gunst."

1. **An Artist Teacher.** — In Tuscumbia, Alabama, in 1880, there was born a little girl who, when she was eighteen months of age, through some affliction lost her eyesight and her hearing. Deaf and blind, she was of course mute, and thus handicapped she began the pilgrimage of life. In the course of time she learned to read by the methods ordinarily employed in teaching the blind. She was not content with reading the English language; she learned also French, German, and Italian. She was sent away to a school in Boston. There she made the acquaintance of many distinguished men and women. She carried on a correspondence with Bishop Brooks. She was a petted favorite of Oliver Wendell Holmes. At his last public appearance, she stood by his side and recited Longfellow's "Psalm of Life." She had learned to speak as well as to read.

Later on, this little girl expressed an interest in a college education. Her friends tried to dissuade her from under-

extinct, was an artist, but an artist far removed from Raphael, Titian, Angelo, and the other great artists who produced the miracles of color in the museums of Europe. So every teacher is an artist; but many are as far removed from the great teachers of the world as the cave dweller is from the skilled artists of ancient Rome. The great need of to-day, a need much greater than it seems to appear to the public, is a body of teachers who are artists in the special sense of that term. If the six hundred thousand teachers of the United States were genuine artists, progress in education would be by leaps and bounds, and the results of education would be far beyond anything that the public at present conceives.

Now let us suppose that a teacher really wishes to become an artist in the work of teaching, what are the qualities it is necessary to cultivate? Perhaps all of them might be summed up under the word "personality," for it is a term vague enough to include almost anything. "To the problem of personality," says President Hyde, "the world has found five answers: the Epicurean, the Stoic, the Platonic, the Aristotelian, and the Christian. The Epicurean says: 'Take unto your life as many simple, natural pleasures as possible.' The Stoic says: 'Keep out of your mind all causes of anxiety and grief.' The Platonist says: 'Lift up your soul above the dust and drudgery of daily life into the pure atmosphere of the perfect and the good.' The Aristo-

telian says: 'Organize your life by clear conception of the end for which you are living, seek diligently all means that further this end, and rigidly exclude all that would hinder it or distract you from it.' The Christian says: 'Enlarge your spirit to include the interests and aims of all the persons whom your life in any way affects.'

"Any man or woman of average hereditary gifts, and ordinary scholarship and training, who puts these five principles into practice, will be a popular, effective, happy, and successful teacher. Any teacher, however well equipped otherwise, who neglects any one of these principles, will, to that extent, be thereby weakened, crippled, and disqualified for the work of teaching. Any person who should be found defective in the majority of these five requirements would be unfit to teach at all." [1]

This any teacher will regard as a "pretty large order." Be perfect in all respects, and you will be a successful teacher! It seems obvious enough, and yet, considering the fact that the opportunity to teach depends upon the judgment of school authorities and patrons who are by no means infallible, it may be doubted whether a teacher gifted with all the virtues that these principles imply could long hold a position in any of our schools. At all events, to be an "artist"

[1] "The College Man and the College Woman," New York, 1906, pp. 250–251.

in teaching, and reasonably successful, it is not necessary to be perfect in all respects, however desirable and practical it may be to set up perfection as an ideal. All that we are interested in now is the recognition of the qualities absolutely essential to constitute the artist in the work of teaching.

Professor Palmer, in his book entitled "The Ideal Teacher," says that there are four qualities of so much importance to the teacher that with them he is sure to succeed and without any one of them he is almost sure to fail. These are: "(1) an already accumulated wealth of knowledge, (2) an aptitude for vicariousness, (3) the ability to invigorate life through knowledge, and (4) a readiness to be forgotten." This brings us a little nearer to the point, but he, too, is discussing the "ideal teacher." However, in Professor Palmer's statement, we have a reduction of the essential qualities of the artist teacher from five to four. If we limit our conception to the necessary requisites, they may be reduced to three. A teacher who is gifted with health and vigor, which must always be assumed as the necessary basis of success, may become an artist in the work of education through the manifestation of these three qualities: (1) knowledge, (2) skill, and (3) interest, and not otherwise. Let us consider each one of these qualities somewhat at length.

3. **Knowledge.** — An essential requisite of an artist of any kind is knowledge. It is impossible to succeed

without it. As a rule, artists who have achieved fame have spent long years in arduous efforts to attain it. This makes untrue, in any complete sense, the idea that the artist is born, not made. No one is born with knowledge. It must be acquired. It is true that persons are born with, or early acquire, a bent toward some particular art or calling. But the artist is born and made, a product of nature and art. While it is true, then, that not every teacher can become a great artist, it is also true that every one can become a greater artist than he now is, and he can do this by the acquirement of more knowledge.

The knowledge requisite in the art of teaching is both general and special. The necessity of special knowledge must be perfectly apparent. The teacher is frequently advised to make a careful preparation for the teaching of every lesson. This is a strong demand upon the time and attention of the rural teacher, for instance, who may have twenty-five or thirty lessons to present in the course of a day. But the advice is good, and for perfectly sound psychological and pedagogical reasons. The presentation of a lesson must have some definite end or object, otherwise it is not artistic effort at all. Art implies always a conscious purpose. To formulate the purpose of each lesson, the end that is to be reached, and then to devise the best methods of reaching that end requires, of course, the special preparation of each lesson.

The special preparation will be all the easier if there has been the proper general preparation. Of course a teacher must know the subject he teaches, unless he is content with the kind of teaching that characterizes some of our Sunday school instruction, in which the teacher must keep his finger on the answer to each question in order to avoid losing the place, and thus losing himself. A teacher should know his subject all around, its facts, and the relations of these facts to other facts.

And this points to an implication that must not be overlooked. That is, that we cannot know one subject thoroughly without knowing other subjects as well. All truth is one. We cannot pick up a single truth without lifting the entire warp and woof of knowledge. Only the All-knowing can have complete knowledge of any fact or subject. This is suggested in Tennyson's well-known lines: —

> "Flower in the crannied wall,
> I pluck you out of the crannies,
> I hold you here, root and all, in my hand,
> Little flower — but *if* I could understand
> What you are, root and all, and all in all,
> I should know what God and man is."

Observe that in the last line he uses a singular verb with a plural subject. He thus indicates, in this line, not only the unity of nature, but the unity of man and God.

The idea here suggested with respect to truth and

knowledge is in one aspect discouraging, because no one may hope to know all about any subject. The encouraging feature of the matter lies in the fact that power in teaching may be increased indefinitely by an increase in knowledge. The conscious purpose of the teacher, then, should be to extend his knowledge as widely as possible. To do this he should proceed systematically. Desultory reading is to be condemned for the same reason that aimless teaching is condemned. To read merely for pastime betrays a woeful disregard of the value of time. The teacher should not spend a part of his time telling his classes how to study, and then neglect all method in his own study. He should take up some particular branch of knowledge, history, literature, natural science, or any subject to which he may incline, and study it intensively. I would recommend particularly a branch of natural science. The reason I do so is because I believe that every teacher should acquaint himself with the scientific method. Read the books of the great scientists, observe their patience, their devotion to the truth, and their absolute disregard of all extraneous opinions and doctrines, no matter how hallowed by time. Take nothing for granted, accept nothing on faith, but subject every proposition presenting itself for your acceptance to the cold, acid test of criticism. It is inconsistent to maintain that we are divinely endowed with the faculty of reason, and then to pretend that this faculty is not to be exerted at all times and everywhere in the

field of knowledge. The artist teacher must be a student, with the spirit of a student. That spirit is reverential, but at the same time critical.

But there is another form of knowledge that must not be overlooked. The teacher who would be an artist must be acquainted with the general principles of education which, in the work of instruction, he endeavors to apply. These general principles are mainly psychological. The teacher must therefore be a student of psychology. I have heard teachers debate the subject as to whether it is necessary for the teacher to know anything of psychology. There are not two sides to that question. One might as well contend that to be successful in agriculture one needs to know nothing about the qualities of different kinds of soil, or of the laws of plant growth. It is true that the teacher need not be a specialist in psychology. To be a specialist in any subject requires the devotion of practically all of one's time and energy. But the teacher needs to acquaint himself with the results of the studies of specialists in psychology. He may let others investigate; it is his business to apply. By reading the works of those who have devoted years to investigation he may acquire a principle, perhaps in a few minutes, which it has cost months or perhaps years to discover and substantiate. The value to the teacher of a study of psychology is thus expressed by Claparède: "Without doubt pedagogy is an art that demands above every-

thing tact, delicacy, and a self-sacrifice that has nothing to do with scientific knowledge; and, in this sense, it is quite certain that a knowledge of psychology does not suffice for one who is to be a good educator. But if it does not suffice, it is none the less necessary, for an art is nothing but the realization of an end, an ideal, by appropriate means. It is, therefore, essential for the artisan to have a thorough knowledge of the material with which he works, and the way to set about his work, if he would get from it the desired effect. Dare we deny, on the other hand, that a moderately deep knowledge of psychology enlarges the horizon of a teacher; enlightens his view of matters, while giving him a greater confidence in himself and a greater authority toward others, combined with an open-mindedness toward methods, the effects of which will make themselves felt in a happy manner in tact, patience, and kindness toward the pupils?"

The necessary special knowledge, then, of a teacher leads inevitably to a knowledge of the principles upon which the art of education is based. He undertakes to control the development of mind and body. How can he be successful unless he is acquainted with the principles of bodily and mental development?

These principles are set forth in the science of psychology. But there is another science with which the teacher should be acquainted. It is the science of sociology. The teacher is charged with more than the

development of the child. He is a social agent, employed for social purposes. He is a factor in the great educational system that is the main instrument of society in realizing its destiny. This makes it necessary for the teacher to understand the laws of social development as well as the laws of individual development. Sociology is the science that devotes itself to the discovery and exposition of these laws. The artist teacher must therefore be acquainted with the subject of sociology as well as that of psychology.

The best place to acquire all this special knowledge should be the normal school. The normal school has not yet come into its own. By many people, even among those who ought to know better, it is supposed that normal training, while it may be a desirable form of preparation, is not essential to the success of a teacher. But normal training should be regarded as just as necessary for a teacher as a course in a medical school is necessary for a physician, or a course in law is necessary to a lawyer. It is merely because the public does not really recognize the importance of education that every teacher is not required to make special preparation in schools provided for that purpose before he undertakes the work of teaching.

So much for the first requisite for the artist teacher. Let us now turn to the second.

4. **Skill.** — Skill is a result of knowledge. It implies method, and method is the highest manifestation of

intelligence. Unless you know how to do a thing, you cannot manifest skill in performing it.

Now, skill in teaching is always a manifestation of a knowledge of the principles that underlie the art of education. Suppose it is a matter of instruction. Do you think a teacher would succeed in imparting knowledge if he wholly disregarded the simple principle of proceeding from the known to the related unknown? Certainly not. But what does that principle imply? It implies the mode of the mind's operations in the acquirement of knowledge. The uninitiated may smile at the formidable word "apperception." They may think it is a term that is employed merely to give the impression of profound knowledge. But whether we use the term or not, no one can succeed in teaching without applying the principles based upon apperception. "Proceed from the known to the related unknown" is a very simple injunction, but it is based upon a knowledge of the mind's power of apperceiving. If we want to know why we must proceed from the known to the related unknown, the answer is simply this: you cannot proceed in any other way! You can kill time, waste your efforts, and destroy the child's interest in knowledge by undertaking to proceed in disregard of this principle, but you get nowhere. Why? Because the mind works in that manner, and it is just about as foolish for the teacher to disregard the manner in which the mind works as it would be to expect results from a machine

of any kind operated without regard to the principles of its construction.

The principle of which we are now speaking is a very simple one; and yet observe how many other injunctions hinge upon it. Why should ideas be presented, as a rule, before words, processes before rules? It is because the word and the rule are, in most cases, not the related but the unrelated unknown. If teachers could once see that the attempt to cram the mind of a child with words, definitions, and rules is a manifestation of gross ignorance, they would not be able to view the result of such teaching with satisfaction or self-complacency. Teachers derive a great deal of amusement from answers that their pupils make to the questions they propound. In nine cases out of ten the laugh is on the teacher, for the answer reflects the poor quality of the teaching. Take, for instance, the composition on Abraham Lincoln, written by a child who had been studying the subject of history. "Abraham Lincoln," he said, "was born in Wales, in 1599. His father was a wool comber, but Abraham didn't like that trade, so one day he was standing by the railroad and a man by the name of Giteau came up behind him and shot him." And then, with a child's disposition to moralize, he added, "but it was not nice of him because he shot him on the railroad." Now, in this composition there are fragmentary ideas with respect to several historical characters. It reveals plainly

that, in the teaching, biographical facts had been presented without regard to their relation to what the boy knew. His mind had been filled like a hopper with unrelated facts, and the result of the examination grind was this peculiar grist.

Let any one recall his own experience in studying the various subjects, and then let him try to calculate the amount of his time that was wasted by the disregard on the part of the teacher of the laws of mental growth, and especially of this one principle: proceed from the known to the related unknown. In botany, for instance, how much of it has been wordmongering! Children "love not the flowers they pluck, and all their botany is but Latin names." Fouillée gives an amusing illustration. "Here are two children," he says, "with a flower. One tells us that it is a gamopetalous dicotyledon; family, borragineous; name, myosotis annua. The other does not know all these names, but he admires it, loves it, and carries it to his mother. You give a good mark to the former and a kiss to the latter." Sentiment, in this case, is more than facts. The object of teaching in botany is not the names of flowers, but an interest in them. And it is the same with other subjects.

To illustrate the absurdity of attempting to teach without a due regard for the principles of the mind's operations revealed to us by the study of psychology, let me present an illustrative lesson. In this lesson we

will suppose that in the choice of a subject the teacher considers his own interest rather than that of his pupils. He has had a course at the university, we may suppose, and has there learned the great importance of the subject of evolution. So he begins the lesson with an endeavor to tell his class what evolution is. He recalls Mr. Spencer's definition in its concise form. So, perhaps, after a few preliminary remarks in regard to the importance of the subject, he tells them that "Evolution is a continuous change from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, with accompanying differentiations and integrations." The successful presentation of this definition produces in him a certain glow of satisfaction at the thought that his pupils must necessarily be impressed with the profundity of his knowledge; but he finds that, while they may wonder, they do not understand. So he tells them that at a later time Mr. Spencer formulated a simpler, more accurate definition of evolution, and he proceeds to give them that. "Evolution," he tells them, "is an integration of matter and a concomitant dissipation of motion; during which the matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, and during which the retained motion undergoes a parallel transformation." Now surely they will understand it! A pupil in whom the sense of humor is not highly developed may urge a further simplification. The teacher then recalls that

the early definition of Mr. Spencer, namely, that "Evolution is a change from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, through continuous differentiations and integrations," was translated, by the mathematician Kirkman, into what he called plain English. "Evolution," he said, "is a change from a nohowish, untalkaboutable, all-alikeness, to a somehowish and in-generaltalkaboutable, not-all-alikeness, by continuous somethingelseifications, and sticktogetherations." If after this definition is pronounced there are those who still profess ignorance, the teacher will request them to remain after school and commit the definition to memory!

Would not such a lesson as this, presented, let us say, in a high school, seem ridiculously absurd? Well, it is not one whit more absurd than for a teacher to require a child to commit to memory the rule, say for long division, before he has carefully developed in its mind the process of which the rule is a description. For what is the result of rule cramming? It is well illustrated by the answer of a boy who on being asked to give the rule for finding the number of square feet in a room, replied, "To find the number of square feet in a room, multiply the room by the number of square feet and the quotient will be the product." Such an answer makes us smile. But the teaching that results in such an answer makes the judicious grieve.

We have now seen how the disregard of a principle

of teaching may signify a lack of skill. Skill, then, we may infer, is but the successful application of the principles of education, and depends primarily upon a knowledge of these principles.

5. **Interest.** — The third requisite of the artist teacher is a genuine interest in the work of the school. It is no more possible to succeed in teaching without enthusiasm for the work than it is to succeed in music, poetry, painting, sculpture, or the dramatic art without the spirit of the artist.

An interest in his work is characteristic of every great artist. Watch the pianist as he performs before a cultured and critical audience. It is usually easy to see that he enjoys the performance as much as or more than anybody else. That is characteristic of the true artist: he delights himself more than others.

Now, interest in the work of education may be acquired by those who do not have it. Conscientious work tends to beget interest, and interest in turn manifests itself in earnest work. The teacher who finds her work irksome, therefore, need not despair. The only state of hopelessness on the part of a teacher is the absence of a wish to become interested in the work of the school.

It is sometimes deplored that there are so many women, especially young women, among the teachers of the country. A redeeming feature of this situation is that most women are naturally lovers of children.

Their interest in child life covers a multitude of pedagogical sins. If I had to choose between a teacher who is naturally sympathetic with children and interested in their welfare, but who knows little, and another who cares nothing for children, but knows much, I should unhesitatingly choose the former. With interest in children, and the work necessary to the unfolding of their lives, all other qualities of the artist may be obtained, but the want of interest is a fatal defect. We may well emphasize the necessity of academic and professional training for the teacher. We can hardly overestimate its importance. But a teacher may have a university education, may know the ancient and modern languages, may understand psychology, and, if interest be wanting, may still be a failure as a teacher. Paraphrasing the language of St. Paul, we may say of the teacher that though he speak with the tongues of men and of angels and have not interest, so far as teaching is concerned he is as sounding brass or a tinkling cymbal; and though he have the gift of prophecy, and understand all mysteries and all knowledge, and though he have all faith so that he could remove mountains, and have not interest, he is nothing. Interest manifests itself in love. Love suffereth long and is kind, envieth not, vaunteth not itself, is not puffed up, doth not behave itself unseemly, seeketh not its own, is not easily provoked by the infirmities of the child, thinketh no evil, rejoiceth not in iniquity but rejoiceth in the truth; bear-

eth all things, believeth all things, hopeth all things, endureth all things for the sake of the child. But whether there be prophecies, they shall fail; whether there be tongues, they shall cease; whether there be knowledge, it shall vanish away; but interest manifesting itself in love never fails. Like the genial light of the sun that draws forth from the plant its leaves, its flowers, and its fruit, so the warm, sympathetic interest of the teacher draws forth from the life of the child the flowers and the fruitage of a noble and beautiful human life. And now abideth knowledge, skill, interest; these three, but the greatest of these is interest.

6. **Conclusion.** — We have now reached the end of the discussion of education as an art. We have seen that it consists essentially in the control of the forces that push forward the child in his physical, mental, and moral development. These forces should be studied attentively. The more we learn of them the more easily are they controlled. Any one who enters upon the work of the great art of education should wish at least to become acquainted with the character of the art and the methods of control that may be employed most successfully. Here as elsewhere, ignorance is the great sin. Anything may be forgiven in the teacher but unwillingness to learn. The study of an art so dignified, so capable of infinite possibilities, whose aim is the double object of perfect individuals and an ideal humanity, should be an inspiration to those who are privi-

leged to practice it. A clear conception of the responsibilities involved in its practice would drive them, it would seem, either to study, or to a positive refusal to assume such responsibilities.

In Rome, in the Church of St. Peter in Chains (San Pietro in Vincoli), is the marvelous statue of Moses, one of the three most famous works of Michel Angelo. The great lawgiver is represented as seated. His right knee is bare. In the marble of this knee is discernible a minute crack or flaw. In explanation the credulous are informed that when the statue was completed it looked to the sculptor so lifelike that he lifted up his mallet and struck it a blow on the knee, with the remark, "Speak, Moses!" But Moses spake not. His lips were cold, glittering marble. No light of intelligence beamed from his sightless eyes. He was but the form, the image, of a man. But the product of the artist who labors in the field of education will speak by word and by act, and will exercise an influence for good or for evil as long as time shall last.

MOLD WITH CARE

I took a piece of plastic clay,
And idly fashioned it one day;
And as my fingers pressed it, still
It moved and yielded to my will.

I came again when days were past,
The bit of clay was hard at last.

The form I gave it still it bore,
And I could change that form no more.

I took a piece of living clay,
And gently formed it day by day,
And molded with my power and art
A young child's soft and tender heart.

I came again when years were gone,
It was a man I looked upon.
He still that early impress bore,
And I could change him — nevermore.

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